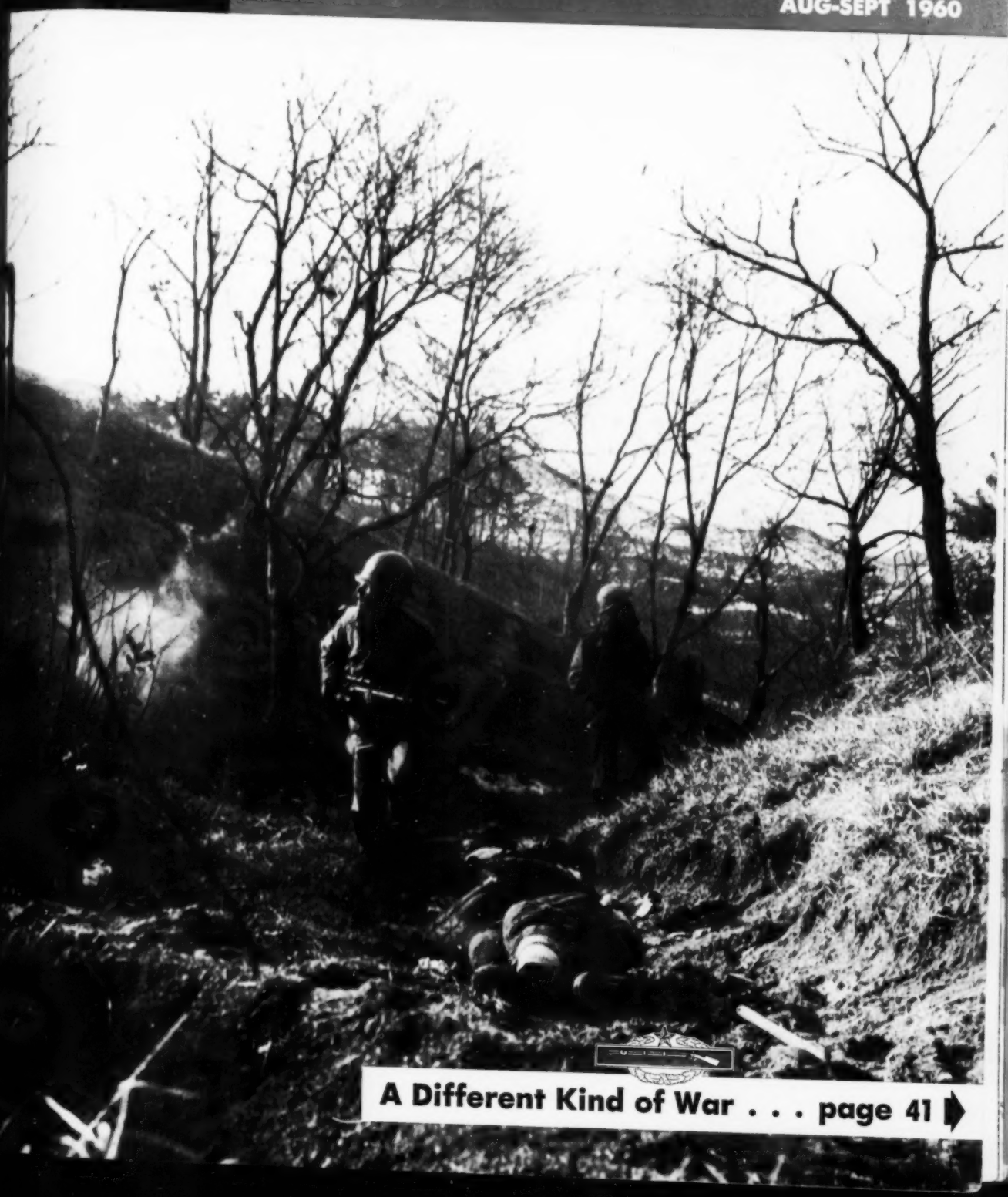
# INFANTRY

The Professional Journal for Infantrymen

AUG-SEPT 1960



A Different Kind of War . . . page 41

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**THE FRONT COVER**

In Korea—and in the Pacific during World War II—the Infantryman fought a "different kind of war." As the cover picture of Infantry combat in Korea so well illustrates, the Infantryman was able to adjust to this different kind of war—to the extremes of weather and terrain—and he was also able to "re-write the rulebook," when necessary, to beat the enemy at his own game.

**THE BACK COVER**

Since our memory of World War II in the Pacific has been dimmed by time, *Infantry* has re-created a view of one of the Pacific battlegrounds as it was then—and as it is today. This poignant revisit to a deserted battle area should serve to remind us of the valor and the pathos of a now-forgotten war.

*Back cover illustration by SP4 John S. McLachlin.*

**CREDITS**

*Photographs for "The East German Army" pp 18-21 from* The National People's Army *(Federal Ministry for All German Affairs) and* Calendar of the National People's Army.

# INFANTRY

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*Infantry*'s mission—As an official publication of the United States Army Infantry School, *Infantry* magazine has the mission of providing current doctrinal information on Infantry organization, weapons, equipment, tactics and techniques. Additionally, *Infantry* has the mission of providing information, through controversial and thought-provoking articles, on new developments and doctrinal trends, thus serving as a forum for progressive military thinking.

Publication of material in *Infantry* does not necessarily indicate that it is the official thinking or has received the indorsement of the United States Army Infantry School.

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# From the Commander in Chief United States Army, Pacific

HEADQUARTERS
UNITED STATES ARMY, PACIFIC
OFFICE OF THE COMMANDER IN CHIEF
APO 958, San Francisco, California

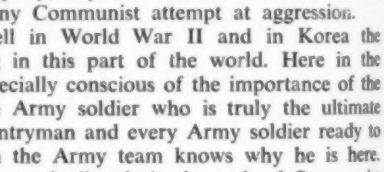
Since this issue of *Infantry* is dedicated to the Pacific Theater, I welcome an opportunity to comment briefly on our Army team in this area.

The Pacific Command extends over 85 million square miles—almost two-thirds of the earth's surface. In this vast area, the U. S. Army, Pacific, must be ready at all times to defend the United States and the Free World against any attempt at aggression by Communist forces.

Fifteen years have passed since the end of World War II and ten since the outbreak of hostilities in Korea. During this period, we have seen the result of nations failing to maintain adequate defense as country after country has been enslaved by the Soviet Colonial Empire. Our own honest but unwise decision to disarm following World War II gave the Communists unwitting license to aggression. It took the brutal attack on relatively unarmed South Korea to bring the Free World to the inescapable conclusion that armed Communist aggression would be stopped only by the force of arms. Our stand in Korea made it clear to all that democracy and freedom are not mere words to us but a form of government and a way of life which we will fight to protect against any form of aggression.

Unlike the five-year period between the end of World War II and Communist aggression in Korea, we now have sizeable, well-trained Army forces in the Pacific with an arsenal that includes missiles and tactical atomic weapons with well-organized logistical support and with high morale. The physical presence of our U. S. Army divisions in Korea, along with United Nations and Republic of Korea troops, is a mighty deterrent to further aggression there. Similarly, the presence of the American Army soldier with his feet on the ground in other areas of the Pacific stiffens the will of other Free World nations to resist the threat of aggression and prevents the Communists from taking over the smaller and weaker countries one at a time. Our combat-ready strategic reserve—the 25th Infantry Division in Hawaii with an airborne battle group well forward on Okinawa—is ready to move rapidly, anywhere in the Pacific, on short notice to storm any Communist attempt at aggression.

We learned well in World War II and in Korea the nature of fighting in this part of the world. Here in the Pacific we are especially conscious of the importance of the fighting man—the Army soldier who is truly the ultimate weapon. The Infantryman and every Army soldier ready to fight with him on the Army team knows why he is here. He knows that he stands directly in the path of Communist ambition. He is well aware of what he must do and he is doing it well. He is a man—doing a man's job.



I. D. WHITE
General, United States Army
Commander in Chief

**THE M14 RIFLE FOLD-OUT**

● [Regarding the] M14 Rifle [April-May 60 *Infantry*] . . . I saw one at Armed Forces Day— a nice redesign of M1—but resupply of ammo at high rate of fire will be rough. . . .

Name Withheld

*In the overall picture, the M14 rifle will pose* fewer *ammunition problems than its predecessor, the M1. Since selector switches (needed for automatic fire) are issued to the company, the company commander can readily control the number of* automatic *M14s in his unit.*

*The present Infantry School recommendation is two automatic M14s per squad. Also, besides being lighter than the M1 (8⅓ lbs as compared to approximately 9½ lbs), the M14 fires the standard NATO cartridge (7.62mm) which is considerably lighter in weight (.04 lbs as opposed to .057 lbs for the caliber .30 round). Since this round is standard in NATO, and in view of the lighter weight of ammunition, the M14 rifle should prove to be a boon to the logisticians—and to the Infantrymen who may want to carry an extra bandoleer or two.* Ed.

**LEADERSHIP VIA RADIO**

● The underlying philosophy expressed in the article, "Wired for Sound," [*Infantry*, June-July 1960] is appalling. It is apparent that the author believes that effective command control via radio is a suitable substitute for personal leadership.

Lieutenant Jones contends that the hard part about the "last hundred yards" is that effective control is lost due to noise and confusion . . . he then extolls the technical qualities of the individual radio which permits leaders to broadcast to their men and be heard in spite of the noise. From this he arrives at the conclusion that this little two pound helmet radio is the answer to the problem of maintaining effective control during critical periods of combat.

Admittedly, the noise of battle makes it difficult to maintain control. . . . However, the biggest problem is not hearing but getting men out of foxholes in the midst of all this noise. . . . I am sure that during all of the field tests the concept of leadership via radio worked well. Will it work in combat?

Maj Thomas R. Dolezal
2742 Bradley Circle
Annandale, Va.

**ANSWERS, PLEASE**

● . . . Since our reorganization under TOE 7-17D and last summer's field training we have come across . . . [several] questions for which we have been unable to find answers:

1. Is there a blank firing attachment or method of firing the [automatic] rifle with blank ammunition . . .?

*No.*

2. On page 112, *Infantry School Quarterly*, July 1956, a blank firing attachment for the M1 rifle to fire semi-automatic was mentioned; has one since been developed?

*No.*

3. Has any thought been given to the addition of a radio-telephone operator in the rifle platoon hq., TOE 7-17D?

*Yes. Considerable thought has been given to the desirability of adding a radio-telephone operator to the rifle platoon headquarters. However, the previous USAIS recommendations for adding this space to TOE 7-17D have not been approved by the Department of Army. In the absence of such an increased manpower authorization, effectiveness of platoon communications will have to be assured by individual local commanders adopting field expedient techniques in providing an operator for the platoon leader.* Ed.

4. Reference Figure 13, page 54, *Infantry*, July 1959. We are still using the handset TS-10 component of the reel equipment CE-11, and as such how does the school recommend that we use these in conjunction with the switchboard SB-22/PT now authorized for the company wire net?

1st Lt Ralph F. Mueller
Co A, 1st BG, 110th Inf
28th Inf Div, Pa ARNG
Monongahela, Penn.

*The diagram in question 4 depicts a type wire system in which the telephone set TA-1 is a component of the reel equipment CE-11. Because the switchboard SB-22, telephone set TA-312, and telephone set TA-1 cannot be used to signal the handset TS-10 without causing possible damage to the TS-10, it is recommended that all handsets TS-10 in a particular system be connected to a single wire line, terminating in a like handset at the switchboard.* Ed.

**ANOTHER WORD FROM THE RESERVE**

● . . . [I feel] the Reserve Forces have let the . . . Infantry School down. I submit that there should be at least one good article each issue by a member of the USAR or USNG for the readers from those components. Benning has turned out thousands of Reserve and Guard officers and NCOs who have returned to their units to apply their USAIS lessons. I am sure that many have had to resort to ingenious expedients and other devices to substitute for the excellent training aids used at the Infantry School. There are probably hundreds of units that would welcome these home-tested aids . . . *Infantry* would provide a good medium to cull out the real gems of these ideas and circulate them for all good, wide-awake subscribers to benefit [from].

. . . This has an added dividend: It furthers the "One Army" concept to every unit of the Army. I might even hope that many former Reserve and Guard officers on active duty could give the readers the benefit of their experiences in solving some of the home station problems. Since Career Management is now trying to have all RA officers [serve] at least one tour of duty with the Reserve forces, this would make them aware of some of the problems ahead and—hopefully—encourage them to offer ideas before and after their tours to increase the training efficiency of their civilian counterparts.

If this idea could be adopted, I do believe it might have a welcome effect on the subscriptions for *Infantry*, too. It could very well put a copy in every USAR and USNG dayroom for the units and get the alert officers and NCOs on the circulation rolls as regular subscribers. . . .

Col R. L. Gillespie, USAR
Cleveland, Ohio

**FROM THE BRINY**

● . . . Your fine magazine is a boon to those of us serving far from field duty with troops, and I often use portions of your . . . articles to enhance our detachment training here aboard the USS Forrestal.

1st Lt Alex Lee, USMC
Marine Detachment
USS Forrestal (CVA-59)
FPO, New York, N. Y.

**ASSAULT OR ANTITANK?**

● . . . I was very surprised to note that the assault gun platoon had been redesignated as the assault weapon platoon [see "Death to the Tank," *Infantry*, Oct-Nov 1959] . . . Wouldn't the name "antitank platoon" be better? . . . To me, assault has the connotation of offensive operations. . . .

Lt Charles D. Sarkiss
Hq & Hq Co, 1st ABG, 504th Inf
APO 185, New York, N. Y.

*Both platoon designations are correct. The assault gun platoon is the correct unit designation for that unit found within the airborne division battle group which has six M56 assault guns. The Infantry division battle group includes the assault weapon platoon. Organic to this unit are five SS10 antitank guided missiles. Recent information incident to these weapons indicates that the airborne battle group will keep the M56 and be augmented with SS10s or an appropriate replacement.*—ED.

# PARTISANS

## THE FORGOTTEN FORCE

by Capt Thomas W. Collier

THE TASK FORCE splashed quickly across the river and entered the woods. This was the last obstacle before the objective; contact was imminent. The advance guard drove expectantly down the road, and flank guards swept along beside the main body. The pace was swift but security was perfect, right out of the book. The old man knew the approach march formation thoroughly and knew the price of being surprised. Only two days ago he had put out the word that half of the men must stand guard at halts while the other half rested.

There had been sniping at the column that day by the local people, but nothing had happened since. The enemy himself was so outnumbered that he stayed huddled in his rather poor position. With the populace reluctant to join him, there was little else that he could do.

Sound like a pushover? Two hours from the moment described above, the task force was a shambles. Sixty per cent were dead or wounded, the old man was down and dying, discipline was broken. Troops threw away weapons and bolted back to the field trains, forty miles to the rear. Nuclear attack? No, guerilla attack! Braddock's task force, 9 July 1755.

*"Yeah, that Braddock was stupid. Old George Washington knew what to do, but the Redcoats wouldn't listen to him."*

No, Braddock was not stupid. He was an intelligent, trained leader in one of the world's best armies. And the Redcoats *had* listened to George Washington, and to every other Colonial with a bloody tale of scalp-taking. They had listened, and they were a little scared, but they had done nothing about it.

*"Come on, don't give me all that old-time jazz. I have a training schedule to make out, and next week we're going on a field exercise. I'm busy, man; if you have something to say to me, say it fast."*

Take a minute to think of this: Like Braddock, you are an intelli-

the words of Stalin . . . and the deeds of their followers . . .

serve to remind us that the guerilla force
is one to be reckoned with . . .

Whether we hear and take heed may determine
our success on the future battlefield.

gent, trained leader in one of the world's best armies. World War II and the violent years of peace since have shown you more guerilla fighting than all three centuries of the Indian wars. And yet, how much do you know *today* about partisan or guerilla warfare? What have you done to train for it? More than Braddock? His first antiguerilla class was held right there on the banks of the Monongahela; his last was too. Have you had your first class yet?

A quick look around will show you that today's world includes some old hands at this guerilla business. Our Communist rivals came to power through guerilla warfare. Marx, Lenin and Stalin publicly extolled the partisan fighter as an effective weapon in the struggle against capitalism. Mao Tse-tung personally led guerilla forces in combat for years, and he has written an excellent text on the subject.

The birth and growth of the Russian partisan bands in World War II shows how earnestly the Communists have followed the teachings of their leaders. Even before the war, German intelligence discovered that Soviet war games included wide use of partisans to scorch earth and harry supply lines as the Red Army delayed and withdrew. The Wehrmacht countered this by forming nine special security divisions to guard the rear areas of the three army groups that would invade Russia.

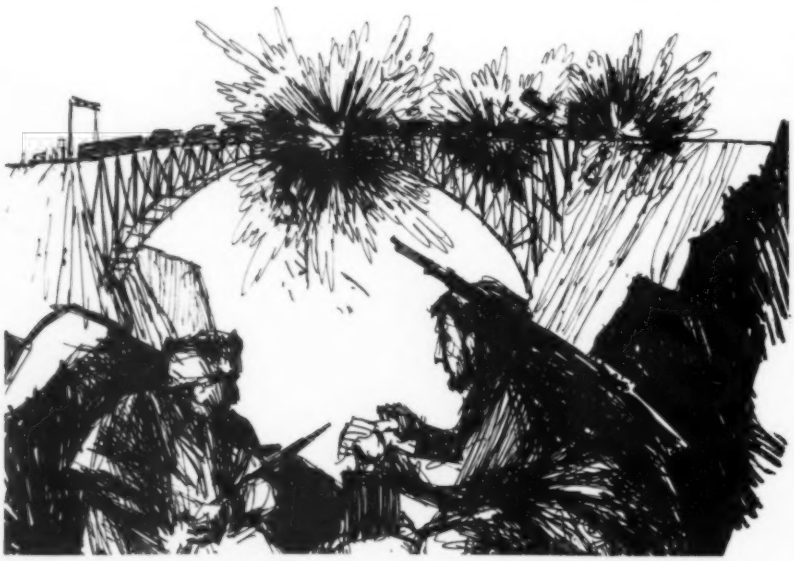
Three days after crossing the border, Army Group Center reported Red guerilla attacks on its supply lines. A week later, Stalin was on the air exhorting the people to band together as partisans to strike the Germans. Within two months, the German High Command had to reinforce its security troops with two Infantry divisions and several SS brigades. Within two years, Army Group Center alone had over 100,000 troops guarding its rear areas. Frontline divisions, pulled back to rest and refit, formally requested to move up on line again to escape the partisan nightmare. On the

**Early in World War II, frontline German divisions, pulled back to rest and refit, formally asked to move up on line to escape the partisan nightmare.**

night of 19-20 June 1944, Red guerillas blew 10,500 cuts in Army Group Center's rail lines. No trains moved for 24 critical hours; reinforcements rushing to meet the expected Soviet offensive detrained and waited. When the repairs were finished, the Red Army stormed in with their great summer drive that swept to the Vistula.

These are merely examples of the Russian second front that fought for over three years behind the German lines. The partisan campaigns did not break the Germans in Russia; the Red Army did that. But the guerillas hounded the Wehrmacht, kept it on edge, and allowed it neither time nor place to rest. They tired the fresh troops and cut up the tired troops. They were a definite factor in the Russian victory.

Communist guerillas have fought in many other lands since World War II. Red partisans won China, Yugoslavia, Albania and Northern Vietnam for Communism. In the mountains of Greece, 28,000 guerillas fought the Greek Army to a standstill. With British and American aid, the Greeks finally fielded an army of over 200,000 men to batter the partisan bands apart. In June 1950, three of the eight Republic of Korea divisions were absent from the border when the North Korean Army poured across. Where were they? Far to the south, battling Communist guerillas. In 1955, 35,000 British Commonwealth troops were hunting out some 4,000 Communist terrorists in the Malayan rain forests. Only last year, Viet Minh guerillas filtered across the frontier of Laos and nearly established themselves in that country before the United Nations and United States could react.



**On a single night in 1944, Russian guerillas blew more than 10,500 cuts in German rail lines.**

The record is as clear as any warning George Washington could have given Braddock. The Communists have never fought a war without using some sort of guerilla force. Since this is the case, and since we must be prepared for this contingency, how do we train for antipartisan warfare?

The first step in training for antiguerilla warfare is simply to inform the soldier that such a thing exists. In 1941, the Russians were delighted to discover that the German troops were unaware of the presence of the partisans. All unknowing, they walked to their deaths in ones and twos as they wandered curiously through the Russian countryside. Single trucks drove along the narrow forest trails and truck convoys were even so foolhardy as to move after dark. Russian peasants moved freely along the roads and even through German supply dumps and bivouacs. German soldiers rarely checked old folks, and never old ladies.

Not until several months after the war started did the Wehrmacht realize, after reading captured partisan documents, that the Russians were laughing at them and taking full advantage of their innocence. Belatedly, they ordered a troop information pro-

gram on the guerilla threat, but the initial ignorance of the German troops allowed the partisan bands to complete the critical formative process without interference. From then on, they gave the German soldiers some troop information lessons of their own. We can ill afford to pay the price they charged for those lessons.

After informing our troops, the next step is to decide what subjects make up antiguerilla training. Since there is no field manual in print on this, listen to the voices of experience:

An officer from the British 6th Airborne Division in Palestine listed these requirements[1]:

1. Discipline, leadership and mental alertness
2. Physical fitness
3. Weapons training
4. Search techniques
5. Knowledge of the local people.

A former troop commander in a Royal Marine command in Malaya suggests these[2]:

1. Patrolling
2. Survival
3. Physical conditioning
4. Marching and march security
5. Map reading
6. Small-unit leadership.

German Army directives, written in the fall of 1942 and based on a year of antiguerilla action, prescribe these subjects:

1. Intelligence training
2. Patrolling
3. Night operations
4. Survival
5. Conduct toward civilians.

These subjects are certainly neither new nor strange to us. Most of them are included, with varying emphasis, in current individual and unit training programs. You may well sigh with relief and conclude that the whole thing has been taken care of, and you are very nearly right. Except for an initial orientation on guerilla warfare, which happens to be an excellent troop information topic, no new subjects or additional training hours are needed. There is, however, one more thing to consider: soldiers are human. Among the many problems that this poses is that they tend to forget things, particularly things that you, their leader, treat as unimportant. You may sing them a song about guerilla warfare, but unless you plug it hard you will not make it a hit.

*"No, you don't mean . . .?"*

Yes, training integration. If you want your men ready to cope with guerillas, you must start now to integrate antiguerilla actions into your training. The next time you are planning your training, take a few minutes to analyze the subjects you are going to teach for antiguerilla applications. Here are two examples:

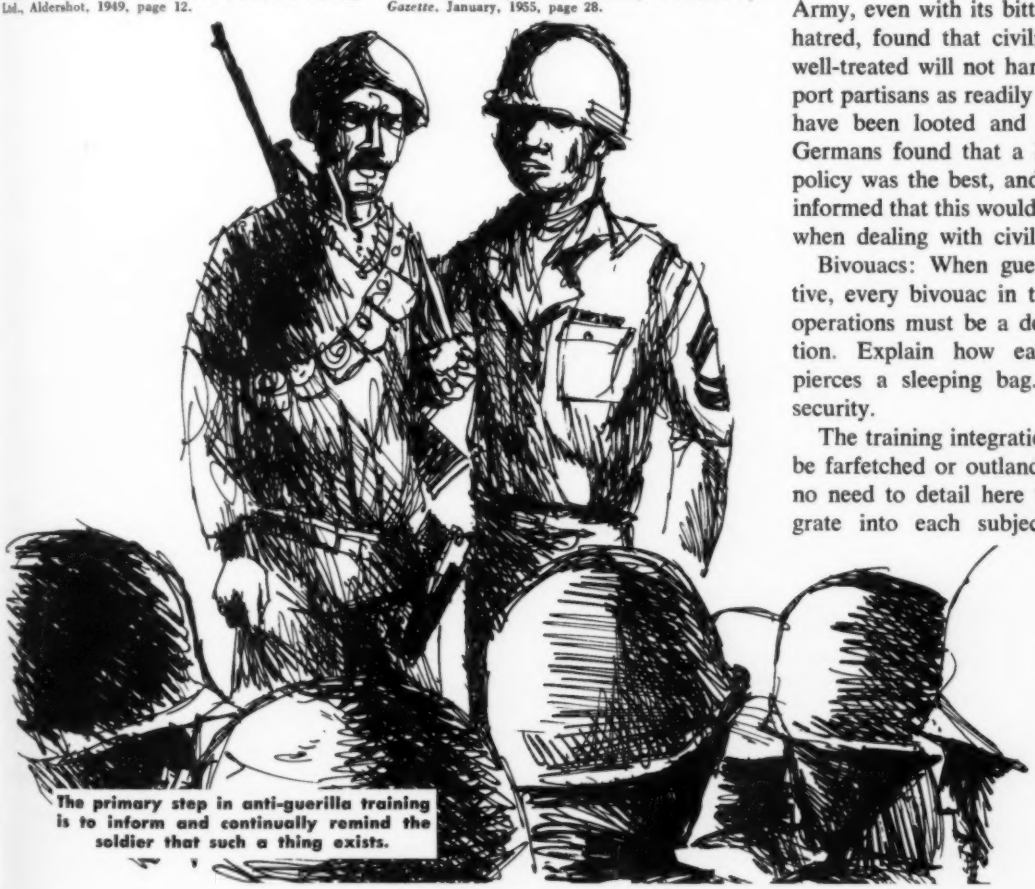
Character Guidance: The German Army, even with its bitter dosages of hatred, found that civilians who are well-treated will not harbor and support partisans as readily as when they have been looted and abused. The Germans found that a hard but fair policy was the best, and troops were informed that this would be the policy when dealing with civilians.

Bivouacs: When guerillas are active, every bivouac in the theater of operations must be a defensive position. Explain how easily a knife pierces a sleeping bag. Stress local security.

The training integration should not be farfetched or outlandish. There is no need to detail here what to integrate into each subject the Army

[1]Wilson, R. D., *Cordon and Search*, Gale and Polden, Ltd., Aldershot, 1949, page 12.

[2]Crockett, Anthony, "Action in Malaya," *Marine Corps Gazette*, January, 1955, page 28.



**The primary step in anti-guerilla training is to inform and continually remind the soldier that such a thing exists.**

**To make troops partisan-conscious, antiguerilla operations should be integrated into all field exercises.**

teaches. In most cases the antiguerilla application will be clear to you. If you have to twist and distort the subject to get an angle to integrate, forget it and move on to another. There are many subjects with good, logical tie-ins; it is not necessary to pretend that every subject has one.

In making your troops partisan-conscious, one type of training is important enough to be considered separately: the field exercise. It is in the field exercise, where you are trying to create the atmosphere of combat, that you can most effectively integrate antiguerilla operations. It is profitable, if your schedule allows it, to conduct an entire exercise as a guerilla hunt. This will give your men plenty of work in patrolling and small-unit leadership, and will give them a real appreciation of the elusiveness of guerillas.

It is equally effective to integrate guerilla situations into other types of field exercises. This can be done logically at all levels. A squad attack can be made on an aggressor guerilla roadblock as effectively as on an aggressor army roadblock. On company and battle group exercises, the guerilla play can also remind the soldier of the presence of guerillas without distracting from other training objectives of the exercise. Dress a couple of your aggressor detail in blue jeans and give them some guerilla missions against your command post, field trains, outposts or supply routes. They do not have to conduct a full-scale Commando raid or capture the complete combat trains. They need only remind the rest of your unit that guerillas will be with us in our next war, if and when it comes.

There are many specific measures that you can take to combat guerillas, but they will not work unless you and your men are conditioned to the partisan threat. Tell your troops about guerillas. As you teach each subject in your training program, explain its antiguerilla application. Most important, show your men during field exercises an accurate picture of partisan action tied in with all the other forms of enemy action.

As General Braddock lay dying in the wreckage of his command, he gasped, "Who would have thought it? We shall better know how to deal with them another time." For Braddock and hundreds of his men, there was no other time. For you and your men, the time is now. The "forgotten force"—partisans—must be forgotten no longer.

---

CAPT THOMAS W. COLLIER is a 1952 graduate of the United States Military Academy. After attending the Associate Company Officer Course at Fort Benning, he was assigned to the 508th Airborne Infantry. In 1954 he served as a platoon leader, company executive officer and battalion S1 with the 74th Infantry in Iceland. Upon returning to the U.S., he was assigned to the 503d Airborne Infantry at Fort Campbell. Captain Collier subsequently served with the 503d in the U.S. and in Europe as a company executive officer, battalion S4 and company commander. He has also served as a company commander and group liaison officer with the 2d Airborne Battle Group, 502d Infantry. He has completed the Airborne and Ranger Courses and graduated from the Advanced Course in May 1960.

# ALTERNATE BATTLE GROUP CP

Modern warfare demands multiple command facilities.

by Maj William B. Fowlkes

A BURST OF LIGHT, a ball of fire, a wave of destruction and an ominous, lingering, mushroom cloud: This is a nuclear explosion. It has been a rare sight recently, but we cannot forget it. The cloud hovers over us as surely as if we were standing at the test sight moments after an explosion. We cannot discount its presence. Indeed, we must continually consider that ominous mushroom cloud in all of our planning for the battlefield of the future.

In many ways we have taken the atomic threat into consideration. How? Chiefly through the use of "dispersion." Dispersion is a word constantly emphasized at all levels of the military from the rifle squad right up to army level. Our defense planners had the need for dispersion in mind when they conceived of the pentomic battle group to replace the regiment. Certainly, dispersion is one of the key factors considered in the employment of battle group tactical units. But what of the very nerve center or "brains" of the battle group, the command post? On this subject, the "book" is not explicit with respect to applying the concept of dispersion. It is content merely to observe that an *alternate* BG CP should be established. But where? How? By whom? With what equipment?

The "where" is not difficult to surmise. First, an alternate command post should be located a sufficient distance from the main CP to avoid destruction of both installations by a single low-yield weapon. Second, whenever feasible, the location of the alternate CP should also be the site of the CP of the combat support company in order that that company's communications equipment may serve as the nucleus of the alternate battle group CP communications setup. In the end, however, the exact location of the alternate battle group CP will

depend upon the inevitable "situation, weather and terrain." It is nevertheless well to bear in mind the two principles outlined above when deciding upon the "where" of the alternate CP. But what of the "who?" What may we use as a guide in deciding who will man the alternate command post? This problem is not as simple.

A modern battle group has absolutely no "dead wood." Everyone has a job to do, especially in battle. Furthermore, little, if any, equipment lies idle or unused for long. The problem of establishing an alternate battle group command post from existing personnel and equipment is, therefore, not an easy one. A feasible solution is not impossible, however.

One possible solution for the establishment of an alternate command post within the means organic to the battle group is to split the command echelon and battle group staff into two separate staffs operating in dispersed locations. The alternate CP could be made up of the deputy battle group commander, S1, S4 and the combat support company commander. Under this arrangement the normal number of staff section personnel and a proportionate share of support personnel would perform their jobs and sleep at the alternate command post.

This solution would provide two command posts organized from personnel within the battle group, and would help ensure continuity of command by qualified personnel. However, because staff and support personnel would be split between the two command posts, neither post would have enough personnel to operate efficiently on a round-the-clock basis, especially over an extended period of time.

| REQUIREMENT | | SOURCE | |
|---|---|---|---|
| **Personnel** | | **Personnel** | |
| Officer | | Officer | |
| CO | Alt BG CP | DCO* | |
| S1 & S4 | Alt BG CP | XO, Cmbt Spt Co | |
| S2 | Alt BG CP | Radar Section Leader | |
| S3 | Alt BG CP | CO, Cmbt Spt Co | |
| Enlisted | | Enlisted | |
| Opns Sgt | Alt BG CP | 1st Sgt, Cmbt Spt Co | |
| Intel Sgt | Alt BG CP | CF Sgt, Cmbt Spt Co | |
| Radio Op/Dvr (CO) | Alt BG CP | Radio Op/Dvr, DCO | |
| Radio Op/Dvr (S3) | Alt BG CP | Radio Op/Dvr, Cmbt Spt Co CO | |
| **Equipment** | | **Equipment** | |
| 1—¼ T Trk | CO Alt BG CP | 1—¼ T Trk | DCO* |
| 1—AN/VRQ-3 | CO Alt BG CP | 1—AN/VRQ-3 | DCO* |
| 1—¼ T Trk | S3 Alt BG CP | 1—¼ T Trk | CO, Cmbt Spt Co |
| 1—AN/VRQ-3 | S3 Alt BG CP | 1—AN/VRQ-3 | CO, Cmbt Spt Co |
| 1—¼ T Trk | S1&S4 Alt BG CP | 1—¼ T Trk | XO, Cmbt Spt Co |
| 1—AN/VRQ-3 | S1&S4 Alt BG CP | 1—AN/VRQ-3 | XO, Cmbt Spt Co |
| 1—Switchboard** | SB-22 S3 Alt BG CP | 1—Switchboard | Comm Plat |
| 1—Telephone** | TA-312 S3 Alt BG CP | 1—Telephone | Comm Plat |

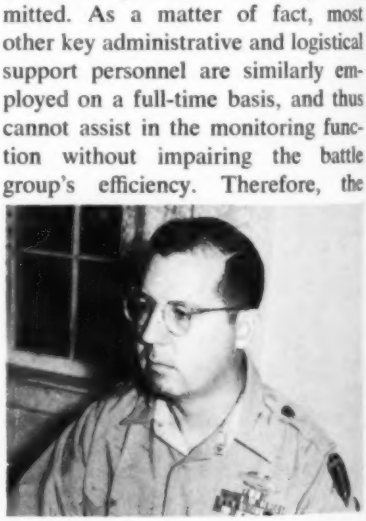
*Deputy Battle Group Commander
**Denotes equipment required for monitoring BG S3 telephone.

**Figure 1. A possible solution for forming the nucleus of an alternate battle group command post.**

A different solution which eliminates this problem is to designate in an SOP certain individuals within the battle group to form the nucleus of an alternate command post (Figure 1). These individuals, mainly from headquarters and headquarters company and from the combat support company, would be able to monitor the battle group's command and administrative radio nets as part of their normal duties. This monitoring could be done by the deputy battle group commander, combat support company commander or executive officer, and by the radar section leader.

The importance of monitoring the battle group's command and administrative nets cannot be stressed too much. Obviously, the personnel of the alternate command post must stay abreast of battle group operations in order to provide continuity of command in the event the main battle group CP is destroyed.

Why, you might ask, cannot personnel of the communication platoon assist in this monitoring? A quick look at their available strength and the job they have to do will answer that question. Thirteen enlisted men, one of whom is the chief radio operator, are assigned to the radio and visual section of the communication platoon. These personnel are responsible for the operation and maintenance of radio stations in six division and battle group nets. The wire section of the platoon is also fully committed. As a matter of fact, most other key administrative and logistical support personnel are similarly employed on a full-time basis, and thus cannot assist in the monitoring function without impairing the battle group's efficiency. Therefore, the



MAJ WILLIAM B. FOWLKES received an OCS commission in 1944. In 1945 he served as a platoon leader with the 378th Infantry in Europe, and in 1946 he served with the G3 section of the 4th Infantry Division. Later he became a battalion S2 and S3 and then served as assistant G3, 3d Armored Division, until 1951, when he attended the Armor School. In 1952 he went to Korea to become advisor to the assistant G3, Headquarters, ROK Army. He attended the USACGSC in 1955 and then was assigned to the Joint Intelligence Group, Office of the Joint Chiefs of Staff. Major Fowlkes is now an instructor in the USAIS Command and Staff Department.

monitoring must be performed by the aforementioned nucleus of the alternate command post.

When an emergency dictates full activation of the alternate BG CP, the nucleus there must receive without delay an initial augmentation of off-duty personnel from the main battle group command post (Figure 2). (These personnel could be required, when practical, to sleep at the alternate command post.) Alternatively, the augmentation could come from other designated personnel whose principal association with a particular staff section would enable them to perform the basic functions of that section in an emergency.

The initial augmentation would be the minimum necessary for operation 24 hours after activation of the alternate CP. If it were necessary to operate the CP for more than 24 hours, an additional augmentation of the staff and communications personnel of the alternate CP would have to be accomplished on a one-to-one replacement ratio.

In the event that the CP of a rifle company, rather than that of the combat support company, is designated as the alternate BG CP, it must receive the support normally given to the combat support company for this purpose. This includes two wire lines in both offensive and defensive situations. With the use of a Phantom circuit, the company can keep abreast of the tactical situation by monitoring all calls to the S3 telephone.

An alternate battle group command post is, of course, an expedient precautionary measure. It is not possible to duplicate entirely the optimum facilities of the main battle group CP. For example, no duplication of the AM radio nets which tie in with division is possible. The alternate CP is, in effect, cut off from the division's command/operations net, intelligence/operations net, air request net and warning broadcast net.

Because the battle group cannot duplicate AM nets, and because long range communication to division (which FM cannot accomplish) is vitally necessary, the battle group commander should, in coordination with the division signal officer, locate the communication displacement equipment of the battle group's area support platoon at the site of the alternate battle group CP. This equipment (1 AN/MRC-69, 1 MTC-4 and 1 SB-611) can, when required, provide entry into the Division Area Communications System. The available facilities will provide 12 circuits each to any two installations within the system.

This displacement equipment cannot operate simultaneously with those sets operating in the vicinity of the battle group CP; the sets at division designated to receive the signal of the battle group sets must be reoriented in order to operate with the set at the alternate CP site. A plan for the reorientation of the division set must be made by the division signal officer in coordination with the battle group commander for implementation when the alternate CP becomes the battle group CP.

It should be noted that the FM nets, on the other hand, can be duplicated with organic equipment available. Command personnel, including the deputy commander and the combat support company commander, have in their vehicles radios effective up to a range of 16 kilometers.

Essentially, it all boils down to this: In driving, it is a sensible precaution to carry along a spare tire. In the event of a blowout, unless a severe accident results, the spare tire permits the vehicle to function normally again. Thus it is with an alternate command post. In the event the battle group CP is destroyed (and unless the entire battle group is devastated), the alternate command post will usually allow the unit to continue functioning. Moreover, this alternate CP can serve as an effective cushion in the event that command control is disrupted by *any* means, e.g., destruction of equipment, loss of personnel, electronic jamming, etc. The solutions outlined above are only examples of how this cushion can be constructed. The important thing is that every unit should have such a cushion for use when necessary.

Just as wise drivers do not wait until they have a blowout to acquire a spare tire, BG commanders should likewise plan now for an alternate CP. Furthermore, they should develop an SOP, appropriate to their unit, for the establishment of this alternate command post. Such a plan made well in advance (and rehearsed) may ultimately determine a battle group's longevity on the atomic battlefield.

| REQUIREMENT | SOURCE |
|---|---|
| **Personnel** | **Personnel** |
| Officer | Officer |
| S1 | Adm Warrant O, Pers Sec Hq & Hq Co |
| Comm O | Plat Ldr Comm Plat Hq & Hq Co |
| Asst S2 | Off-duty Asst S2 |
| Asst S3 | Off-duty Asst S3 |
| Enlisted | Enlisted |
| Sgt Major | 1st Sgt Rifle Co |
| Chief Msg Cen Clerk | Off-duty Clerk |
| Asst Intel Sgt | Off-duty Intel Sgt |
| Asst Opns Sgt | Off-duty Opns Sgt |
| **Equipment** | **Equipment** |
| One Desk Field Portable | Augmentation of Cmbt Spt Co TOE |
| Two Typewriters Portable | |
| One Duplicating Equip Set (Ditto) | |
| Four Telephones | |
| One CP Tent | |

*NOTE: The displacement equipment from the signal area support platoon which is used in displacement of the main battle group CP will be physically located at the alternate battle group CP site. This is done for the purpose of re-establishing communications with division in accordance with instructions from the division signal officer and/or the division SOP.*

**Figure 2. Augmentation of the alternate BG CP may be readily accomplished from the sources indicated above.**

*This article is in consonance with current doctrine as taught at the United States Army Infantry School.*—Editor.

# INFANTRY AROUND T

## KOREA

### 1st Battle Group, 8th Cavalry

### 1st Cavalry Division

AT THIS moment, a sentry of the famed 8th Cavalry ("Mustangs") is looking from his post into the hostile territory of Communist-held North Korea. He is carrying on the proud tradition of his organization, which has long guarded the farthest frontiers of freedom against all enemies.

Organized in California in 1866, the 8th Cavalry Regiment took as its motto the phrase "Honor and Courage." Both honor and courage were needed in the unit's first mission—guarding the western frontier against the attacks of savage Indians. In accomplishing this mission, the unit made, in 1888, the longest mounted march ever made by an American cavalry regiment—a 2667-mile journey from Fort Concho, Texas, to Fort Keough, Montana. In all, its activities on the western frontier earned the 8th Cavalry five battle streamers for participation in major campaigns.

With the outbreak of the Spanish-American War in 1898, the Mustangs sailed to Cuba, where they remained for four years. During the two decades following, the Regiment participated in the Mexican Expedition and saw service in the Philippines. It was not to be the last time the unit braved the mountains, swamps and jungles of this area.

As a part of the 1st Cavalry Division ("The First Team"), the 8th Cavalry gave that division another first in the Philippines during World War II. In February 1945, it became the first unit to enter the war-ravaged, shell-torn city of Manila, where it freed more than 3700 prisoners held captive at Santo Tomas University. For its actions there, the 8th Cavalry was awarded the Philippine Presidential Unit Streamer. In addition, the 8th earned battle streamers for action at New Guinea, Bismarck Archipelago, Luzon and Leyte during World War II.

Five years later, war was raging again. This time, Korea was the scene, and the 8th Cavalry scored another first. After breaking out of the Pusan perimeter, the Mustangs raced northward and became the first unit to enter the North Korean capital city of Pyongyang. Altogether, the unit earned nine battle streamers for its actions during the Korean War.

Today, the 8th Cavalry is still true to its tradition. It is again defending the frontiers of freedom as it stands guard north of the Imjin River in Korea immediately adjacent to the demilitarized zone.

Because of its key location, the unit must maintain a high level of combat readiness. It achieves this readiness through realistic training in tactics from squad level through battle group level. A high turnover of personnel caused by the short Korean tour of duty necessitates a continuing training program. This program is conducted under rigorous conditions throughout the year, with frequent alerts, field training exercises and night problems.

In line with recent thinking on defensive warfare, the 8th Cavalry is well dispersed all along what would probably be the front line in the event of Communist attack.

Following the pattern of dispersion, each company and mortar battery has a separate camp located in close proximity to the unit's battle position. Each of the subordinate

**8th Cavalry positions directly overlook the Communist-held territory of North Korea.**

# THE WORLD

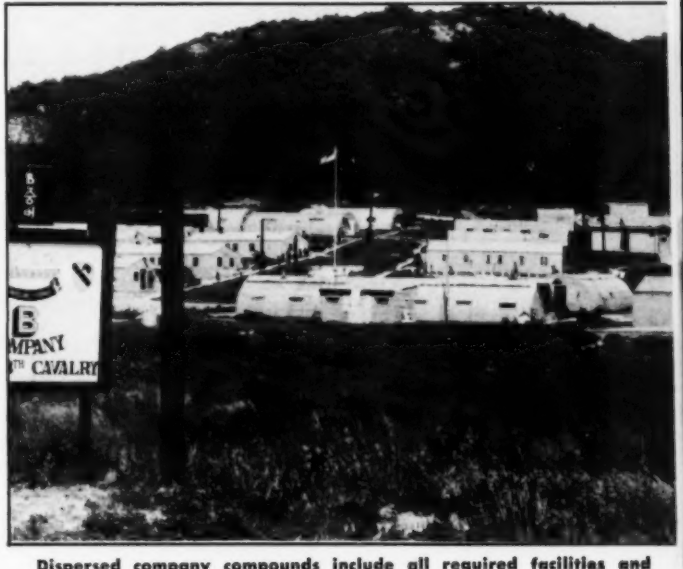
camps has its own facilities to provide for the educational and recreational needs of its members, including libraries, post exchanges, dayrooms, and separate officer and NCO Clubs. In addition, there is a large consolidated recreation area which includes a library, post exchange, theater, athletic fields, gymnasium, craft shops and other facilities. Courses of instruction are available from junior high level right up through college level classes provided by the University of Maryland.

The 8th Cavalry also has one of the finest chapels in Korea. Constructed from native stone over a two-year period, the edifice is the center of an active religious program.

The recreational, educational and religious facilities described are evidence of the realization that the morale of the men of the 8th Cavalry is of vital importance to the defense of the frontier in Korea. With pride in its facilities and fighting capabilities, the 8th Cavalry carries on its tradition of being first on the frontiers of freedom.

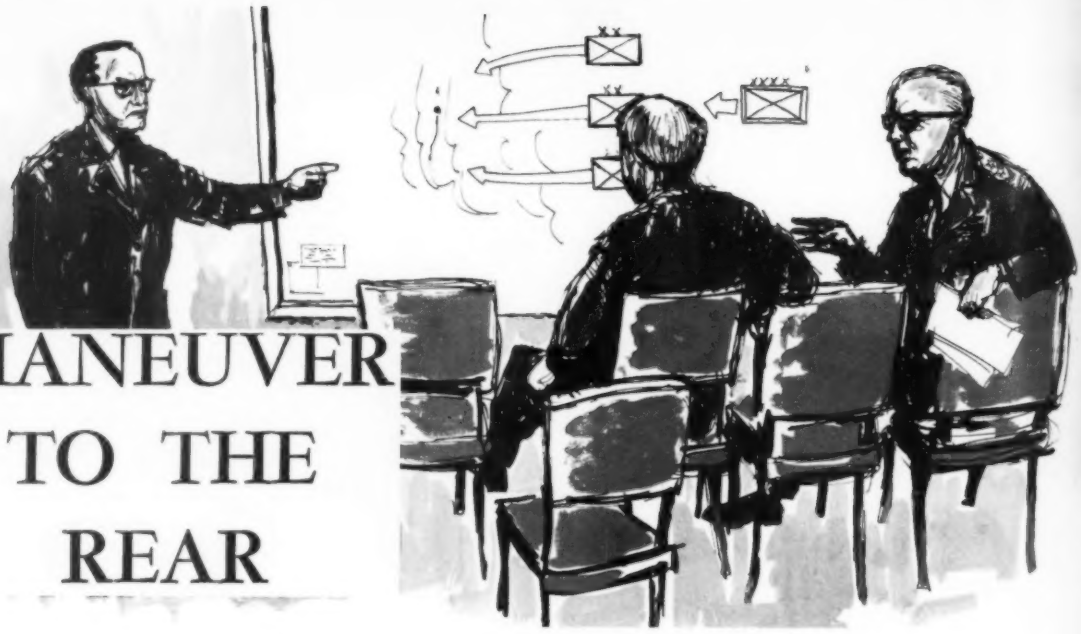
At this moment, a sentry of the 8th Cavalry is looking from his post into North Korea. . . . It is a lonely post, but he is proud to be there.

**Frequent mobility exercises help retain the 8th Cavalry's tradition as a swift-moving striking force.**



**Dispersed company compounds include all required facilities and resemble miniature army posts.**

**8th Cavalry unit training varies from the squad attack course through combined arms team exercises. The end result is an alert, aggressive Infantry unit — living up to its past tradition, guarding the frontiers of freedom.**



# MANEUVER TO THE REAR

An army can be easily moved on a situation map. On the ground—at the squad and platoon level—it's a different story.

by Maj Gordon E. Williams
& 1st Lt William R. Whitley II

WHEN the Army G3 sweeps his arm across the situation map and pronounces that "Tenth Army will withdraw to Phase Line Alfa commencing at 0600 hours," a casual observer might be led to believe that this maneuver to the rear is a relatively simple task. Certainly, with a sweep of the arm (or a touch of the grease pencil) an army *can* be quickly moved to the rear. But this is only on a situation map.

At the squad and platoon levels, where the success of any battle is ultimately determined, it's an entirely different story. For it is at this level that the arrows and circles on a situation map become flesh and blood. And it is also at this level that the simple sweep of a G3's arm becomes a complicated maze of fire teams, squads and platoons maneuvering and firing to accomplish the retrograde mission.

Since the retrograde maneuver at the lower echelons is so critically important, there is often a mistaken belief that these maneuvers are extremely difficult to plan and even more difficult to carry out. This, however, is not the case.

At the squad and platoon level, it boils down to the same old elements of fire and maneuver, with perhaps a little more emphasis on coordination and teamwork.

To begin with, the retrograde movements—defined as any organized movement to the rear or away from the enemy—can be categorized as one of the following:

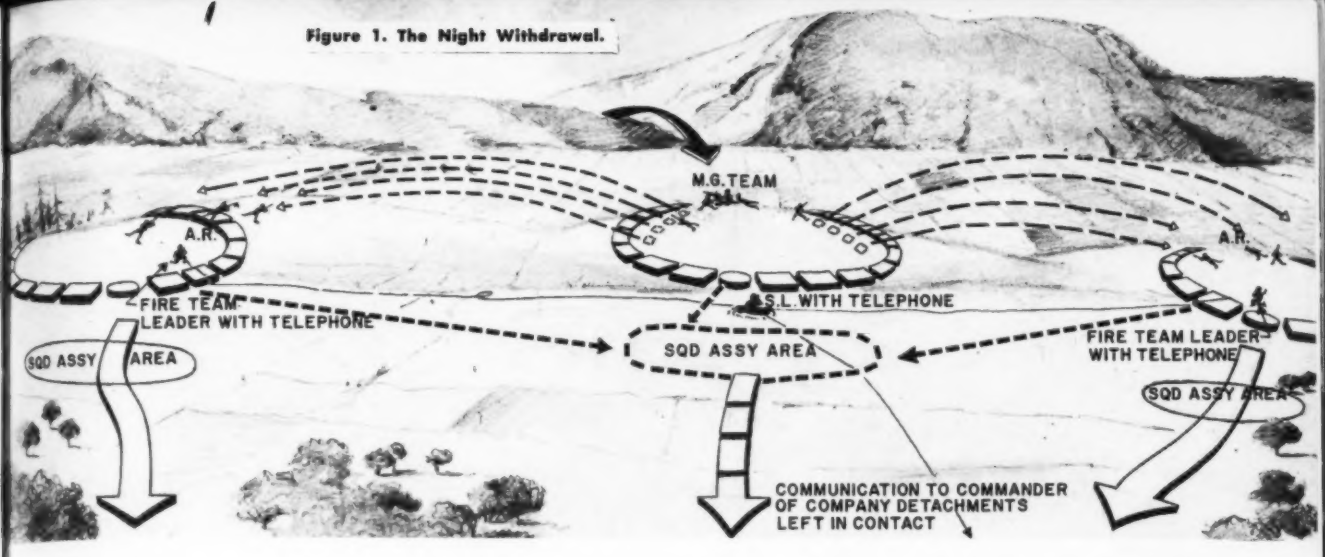
- a withdrawal from action
- a delaying action
- a retirement

## WITHDRAWAL FROM ACTION

At the squad and platoon level, the withdrawal from action deserves the most attention because it is the most common form of retrograde—every type of retrograde made from hostile contact necessarily beginning with a withdrawal from action. It is also during this withdrawal phase that the small unit leader has the greatest opportunity for causing the success or failure of the entire retrograde.

The withdrawal from action is classified as either a *night* withdrawal or a *daylight* withdrawal. However, this terminology deserves further discussion since, under certain conditions, a night withdrawal may actually be conducted utilizing daylight techniques. Conversely, a withdrawal during daylight hours may be conducted using night withdrawal techniques. What should be remembered is that these two types of withdrawal are distinguished by the degree of visibility and the absence or presence of enemy

Figure 1. The Night Withdrawal.




pressure.

Thus the *night* withdrawal (secrecy *can* be maintained) is conducted during periods of reduced visibility, and in the absence of enemy pressure. And the *daylight* withdrawal (secrecy *cannot* be maintained) is made during periods of good visibility or when a withdrawal is forced by enemy pressure, *regardless* of the time of day or night.

### Night Withdrawal

The night withdrawal allows for the simultaneous movement to the rear of all forward forces except for the detachments left in contact, which remain on position to protect the withdrawal of the main body by deception and by resistance when necessary (Figure 1). The detachments left in contact are normally composed of one-third of the rifle elements and one-half of the crew-served weapons. The rifle platoon accomplishes this by leaving one organic rifle squad, one machinegun and two 3.5-inch rocket launchers (when an armor threat exists), with the rifle squad leader in command. It should be noted that this squad remaining behind spreads out to cover the dangerous avenues of approach previously covered by the other squads of the platoon. The idea behind this is to simulate normal activity of the unit and to prevent the unit from being surprised. The detachments left in contact later withdraw at a specified time or on order, preferably prior to daylight the next day.

### Daylight Withdrawal

The daylight withdrawal is executed by forward elements fighting their way to the rear, with units (covering forces) positioned to cover the withdrawal of the forward elements. There are three methods at rifle platoon level for accomplishing this withdrawal while under enemy pressure or during periods of good visibility. These are the *squad maneuver, fire team maneuver* and *thinning the lines by type weapons*.

When the *squad maneuver* method of withdrawal is used, one squad with crew-served weapons attached is left on position as a rear guard (Figure 2). The rest of the platoon is withdrawn to the rear. The rear guard is withdrawn when the remainder of the platoon has reached the next terrain feature to the rear, or when the first withdrawing elements are in a position to cover the withdrawal of the rear guard. Of course, if the enemy pursues closely, it may be necessary for the platoon to fight its way to the rear by a continuous leap-frogging of squads and crew-served weapons.

Figure 2. The Squad Maneuver.

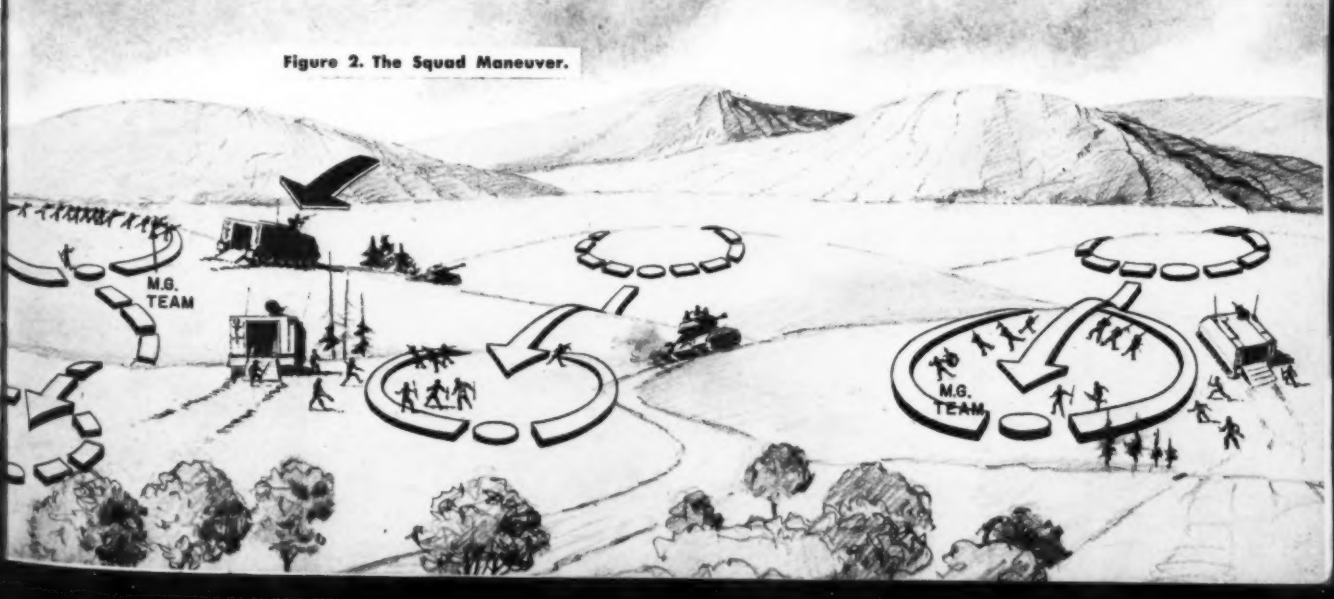


Figure 3. The Fire Team Maneuver

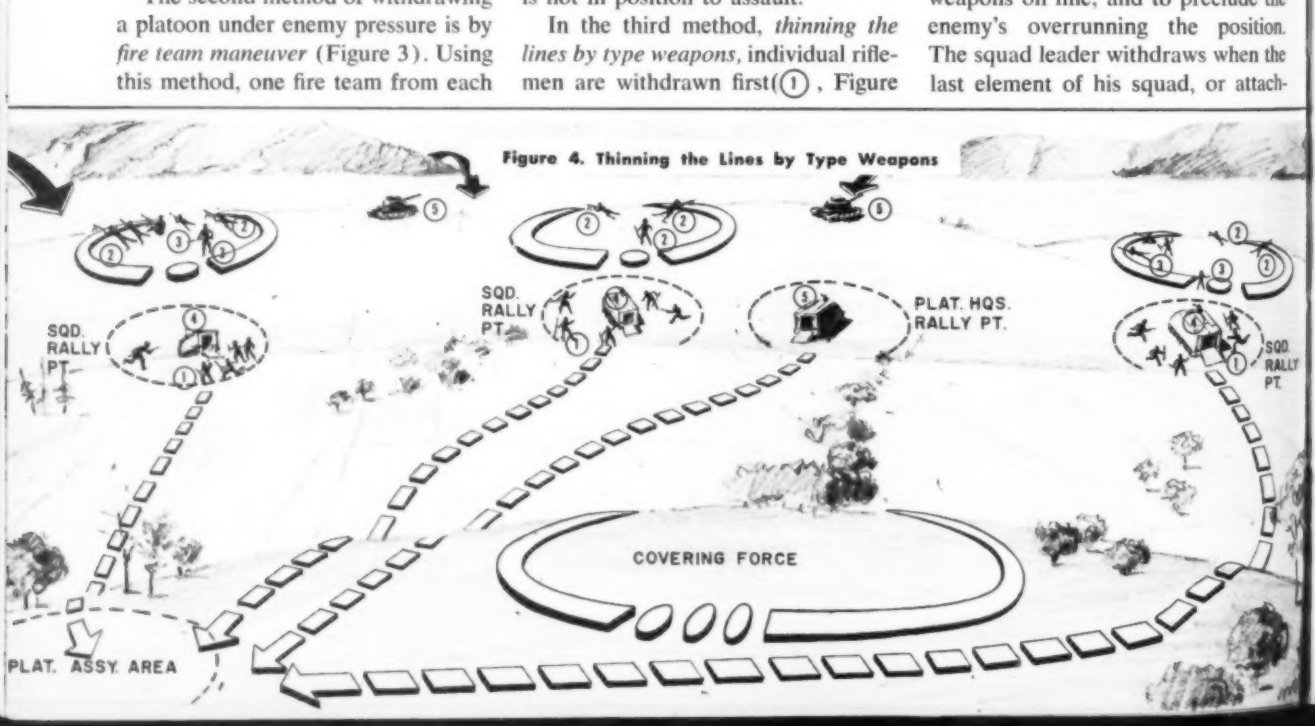
In this *squad maneuver,* armored personnel carriers may be used by all elements of the platoon. If the number of APCs is limited, the squad acting as rear guard should have priority of use. When tanks are available (and terrain permits), they should be left with the rear guard. The squad which is designated as rear guard must be able to cover by fire *all* approaches leading into the platoon position in order to prevent the enemy from overrunning the position and outflanking the squad. In this regard, it should be noted that the *squad maneuver* is best used when the enemy is moving slowly on a narrow front, and is not in a position to make an assault.

The second method of withdrawing a platoon under enemy pressure is by *fire team maneuver* (Figure 3). Using this method, one fire team from each squad moves to the rear and takes up positions from which it is able to support by fire the withdrawal of the fire team left on position. Machineguns are moved by bounds to the rear in the same manner as the fire teams. Armored personnel carriers are best positioned on a terrain feature to the rear, and their machineguns should be used to protect the elements of the platoon as they withdraw. As for antitank weapons, the situation will dictate when they are withdrawn. When tanks are available (and terrain permits), they remain in position with that portion of the platoon in contact with the enemy. The *fire team maneuver* method is best used when the enemy is advancing on a wide front and is not in position to assault.

In the third method, *thinning the lines by type weapons,* individual riflemen are withdrawn first(①, Figure 4). The automatic rifles ② are withdrawn next, followed by the machineguns ③. Armored personnel carriers ④, when used, then withdraw after loading. They should be so placed that maximum advantage can be taken of their mounted machineguns, while still allowing personnel to load rapidly. The need for antitank protection determines when rocket launchers and other antitank weapons (except tanks) will be withdrawn. When tanks ⑤ are available (and the terrain permits), they are the last element withdrawn.

As one element moves to the rear, the elements remaining on position increase their rate of fire to compensate for the decreased number of weapons on line, and to preclude the enemy's overrunning the position. The squad leader withdraws when the last element of his squad, or attach-

Figure 4. Thinning the Lines by Type Weapons



ments, has withdrawn. Individuals withdraw to the squad rally point, and the squads withdraw to the platoon assembly area. *Thinning the lines by type weapons* can be successfully employed against a fast approaching enemy who has commenced his assault. However, this withdrawal must be well covered by another force, or the withdrawing elements must be able to reach concealment prior to the enemy's arrival at the vacated position (otherwise the enemy could place unopposed direct fire on exposed withdrawing elements). It should be noted that *thinning the lines by type weapons* is the fastest means of conducting the daylight withdrawal.

In any discussion of the daylight withdrawal, it is well to remember that the decision as to which method (*squad maneuver, fire team maneuver,* or *thinning the lines by type weapons*) is employed depends on many considerations. The platoon leader must evaluate the amount of enemy pressure, terrain available, condition of own troops, action of adjacent units and, of course, the mission. In the withdrawal, as in any other maneuver, there cannot be a rigid adherence to guide lines at the expense of thoughtful consideration of all variable factors. To do so may necessarily invite failure.

### THE DELAYING ACTION

Another important form of retrograde is the delaying action. Here, a unit will trade space for time, inflicting maximum casualties on the enemy *without* becoming decisively engaged. In order to do this, a platoon is placed in a position generally on the topographical crest of a hill. It physically occupies an area no larger than that in the normal defense; however, greater gaps are found between platoons. These larger gaps between platoons exist since extreme frontages are normally assigned to forward companies in a delaying action.

To conduct a delaying action, the enemy is taken under fire at extreme ranges with all available effective fires. Additionally, he is kept under an ever-increasing volume of fire as he nears the position. Prior to the time the enemy launches his assault, the delaying force is withdrawn to another delaying position or to the rear of the covering forces. This withdrawal is conducted at squad and platoon level in the same manner as the daylight withdrawal, i.e., utilizing one of the three methods previously mentioned (*squad maneuver, fire team maneuver,* or *thinning the lines by type weapons*).

### THE RETIREMENT

This form of retrograde is one in which a unit withdraws without enemy pressure in order to avoid contact under existing conditions. At squad and platoon level, a retirement has little tactical significance since these units normally participate only as segments of a larger force. As such, they perform various missions as part of the security for the main body or as part of the main body. At the squad and platoon level, no special tactics or techniques are employed in the retirement. In a true retirement, it is simply a matter of "picking up the marbles" and moving out.

These are the basic tactics, then, for the conduct of the retrograde by the squad and platoon. Certainly there is nothing complicated or difficult about these tactics in the planning or the application stage. What *is* difficult (and often forgotten) is that a retrograde action also places the highest premium on leadership at the lower unit level.

It is here that morale can become a problem if strict control and discipline are not maintained. It is also here that we find the greatest need to dispel rumors and keep all men informed of the situation.

Additionally, squad and platoon leaders are faced with the requirement to make their plans and orders detailed and yet flexible. In the retrograde, greater emphasis must also be placed on security to guard against surprise enemy assault by ground or air. And every effort must be made to prevent wounded personnnel and materiel from falling into enemy hands.

When we add up all of these factors that bear on the actions of squads and platoons in the retrograde, we can draw at least this one conclusion: the maneuver to the rear can be a complicated, hazardous and extremely difficult endeavor. Whether it is all of these—or none of these—depends, in great part, upon the small-unit leader.

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*This article is in consonance with current doctrine as taught at the United States Army Infantry School.*—Editor

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MAJ GORDON E. WILLIAMS entered the service with the Colorado National Guard in September 1940 and served in Europe during World War II. In 1945 he received an OCS commission in France. After serving as an advisor to the Army Reserve in Colorado, he went to Korea in 1950 and served with the 8th Cavalry as a platoon leader, executive officer and company commander and as S2 and S3 of the 3d Battalion. Major Williams went to Germany in 1955 where he held command and staff assignments in the 39th and 5th Infantry Regiments and in the 2d Battle Group, 8th Infantry. He has completed the Associate Advanced and the Ranger Courses at Fort Benning and the Air-Ground School in Ramstein, Germany. Major Williams is presently an instructor with the Defense Committee of the Ranger Department, USAIS.

1st LT WILLIAM R. WHITLEY II entered the Army in 1955 and received his OCS commission at Fort Benning in September 1956. After graduation from the Basic Airborne Course he was assigned as a rifle platoon leader and company commander with the 87th Infantry, 10th Infantry Division, in Germany. He has also served as a mortar battery reconnaissance and survey officer and as a rifle platoon leader in the 6th Infantry in Berlin. Lieutenant Whitley attended the Instructor Training Course in 1959 and the Ranger Course in 1960. His present assignment is with the Ranger Department, USAIS, as an instructor on the Defense Committee.

# The East German Army

by Capt Otto P. Chaney Jr.

**The "goose-step" is seen again in East Germany! The uniforms are deliberately modeled on those of years past in an attempt to tie German military tradition to the SED — the ruling party.**

Nikita Khrushchev has once again threatened to sign a separate peace treaty with the puppet East German government and has likewise threatened to hand over to this regime the control of the lifelines to West Berlin. Further, he has boasted that Soviet armed might would back up East German forces in preventing American aid from reaching the beleagured outpost.

Since these East German forces are a relatively new military force, little is generally known as to their capabilities, strength and armament. The following is intended to fill this information gap by giving a capsule pictorial summary of this potent East German force.

In January 1956, the "Barracked People's Police" (BPP) of East Germany became the "National People's Army" and took its place in the Warsaw Pact group which provides for a common supreme command of the Soviet controlled Eastern bloc countries.

The National People's Army is composed of land, sea and air forces and has an approximate strength of 115,000. Headquarters of the Ministry of Defense is located in Strausberg, to the east of Berlin, and the ground forces are divided into a Corps "Nord" (North) at Neubrandenburg, and Corps "Sud" (South) in Leipzig. Each corps controls at least one panzer and two motorized divisions, an antiaircraft regiment, and an engineer battalion. In addition, a motorized division and five "special" regiments are located in the vicinity of Potsdam, which borders on West Berlin and through which Allied trains must travel to reach Berlin.

These forces are reinforced with approximately 200,000 persons who make up various para-military organizations throughout the so-called German Democratic Republic. In addition, approximately 22 Soviet divisions and an air army are strategically dispersed throughout East Germany and serve the dual role of a springboard group against NATO and as a guarantee force that Khrushchev's policies in this satellite will be fulfilled.

The Soviet Army furnishes many of the training cadres and most of the arms for the East German Army. The East Germans provide their own transportation and uniforms and maintain 18 officer training schools representing each branch of service.

The armed forces are recruited by "voluntary compulsion," as a young man has the alternative of military service or the poor wages and rations of mining or heavy industry. The serviceman enjoys a higher standard of living than his civilian counterpart, and generally the hope for higher education hinges on a record of military service.

Any comment on political reliability would be dangerous and presumptive. The Soviets have carefully selected the "top brass," and the younger officers and men have been subjected to a decade and a half of Communist indoctrination. It is interesting to note that about 75% of the senior officers served in the Wehrmacht, and about 35% of all officers have received military training in the Soviet Union.

Equipment figures are, of course, classified, but unclassified West German sources provided these statistics on the East German Army a year or two ago:

| | |
|---|---|
| Self-propelled guns (86mm-100mm) | 750 |
| Mortars (all types) | 1500 |
| Tanks (T34, T54, Josef Stalin 2s & 3s) | 1500 |
| Howitzers (122mm-152mm) | 1000 |
| AA guns (to 105mm) | 500 |
| AT guns | 900 |
| Close support aircraft (MIGs, YAKs, etc.) | 700 |

The accompanying photographs provide a rare glimpse of these East German forces.

Soviet cadre assist East German soldiers in the handling of an antitank weapon.

CBR is stressed in the East German Army. Here, a check is made of protective masks and clothing.

East German forces are supplied with the Soviet Armored Personnel Carrier BTR-152 and the T34 tank.

Here an NCO supervises a class in mechanical functioning. The weapon is the Soviet World War II submachinegun which was distributed to satellite armies when the USSR adopted newer weapons.

The twin-barrel 57mm self-propelled antiaircraft gun, a Soviet weapon, is a part of East German AA units. It can be used in a ground-support role.

Mortars play an important role in the East German Army. Here, the crew prepares to fire the 120mm mortar, which has a range of 6,500 yards.

# The East German Army

Soldiers learn small unit tactics and patrolling early in their training.

East German troops are shown drilling with a target acquisition device and 85mm AA guns.

The East German Air Force is equipped with the Soviet supersonic MiG-15. Markings of the so-called "German Democratic Republic" can be seen on the tail section.

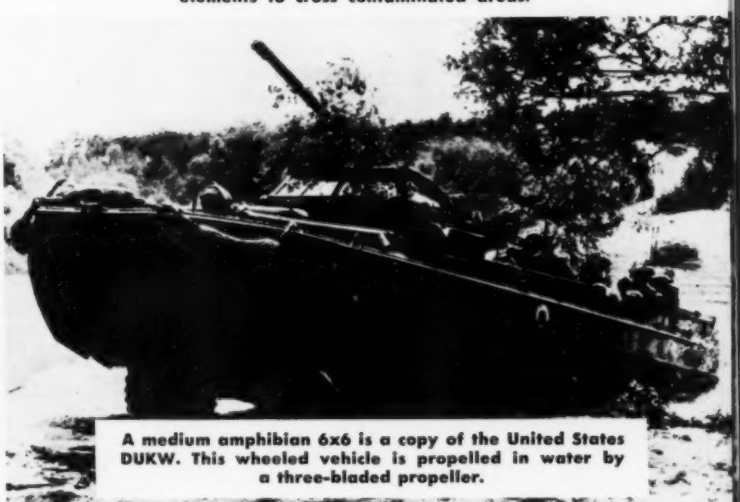
In a live-fire problem an East Germa machinegun team lays down fire fro a Soviet 7.62mm Goryunov Heavy M chinegun.

An East German engineer clears a pa through barbed-wire fences to permi passage of infantry.

A camouflaged antitank gun goes into position.

Infantry rides into battle on armor. Tanks also assist walking elements to cross contaminated areas.

Stress is placed on physical conditioning under simulated combat situations.



A medium amphibian 6x6 is a copy of the United States DUKW. This wheeled vehicle is propelled in water by a three-bladed propeller.

A modern communications system ties together a highly trained, well-equipped East German Army whose effectiveness is well portrayed in the foregoing pictures.

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CAPT OTTO CHANEY JR. was commissioned at Davidson College in 1953 and attended the Basic Infantry Officers Course at Fort Benning. He later studied at the Army Language School, Monterey, California. While assigned in Europe, Captain Chaney toured Czechoslovakia, Poland and the Soviet Union and traveled extensively in East Germany. He is presently assigned to the Office of the Assistant Chief of Staff for Intelligence, Department of the Army.

# INFILTRATION

by
Major Gordon Sumner

*Pain makes one think. Thought makes one wise. Wisdom makes life bearable.*
Okinawan Proverb

During my brief sojourn as a Chinese prisoner and later while recuperating from wounds, frostbite and pneumonia, I gave serious thought to this bitter and painful experience. Frequently, my thoughts returned to the night of my capture and how it happened. And in retrospect, much of my thinking centered on the infiltration tactics which made this capture possible.

It was these same tactics—infiltration in strength—which later found wide use against other United Nations forces in the late fall and early winter of 1950.

As I now look back I realize that some of my observations of that night have jelled into several conclusions regarding these tactics. I would not presume to consider these conclusions as wisdom, but perhaps they will contribute somewhat to the body of professional thought on the subject of infiltration as it applies to the future battlefield.

My experience with infiltration began on the 29th of November 1950. It was another cold night in Korea and my unit, the 7th Cavalry Regiment, was blocking the southward advance of the Chinese Communists in the Sinchang-Ni area north of Pyongyang. It was the Regiment's mission to block the Communists for at least 72 hours in order to permit other United Nations forces to withdraw over the area's limited system of roads.

The Communists' avenue of approach in this particular area was a north-south valley with a single road running along its eastern edge. The 7th Cavalry guarded the southern end of the valley, with its units disposed to either side in the wooded hills and ridges which rimmed the south end of the valley. I was the artillery liaison officer with the 7th Cavalry's First Battalion, which protected the Regiment's right flank along the eastern side of the valley.

We had occupied our rather extended positions around 1600 hours. Our intelligence reports indicated that the Chinese would launch a coordinated attack the following morning. However, at about 2200 hours that same evening, the Communists attacked in force, overwhelming our advance roadblocks and threatening our main positions. We retaliated with a heavy concentration of fires which seemed to cause a breakup of Chinese forces and a cessation of the attack.

A short time later, however, members of the Battalion became aware that some Chinese troops were working their way through our position, but no one seemed to know the significance or extent of their movement. Then, not quite two hours after the Chinese had launched their original attack, whistles sounded to our rear. About 20 minutes later, bugles sounded. These were evidently signals for the Chinese to reassemble into tactical units. Their assembly was apparently accomplished on a ridge to our rear which could be easily identified by the Chinese. A short time thereafter, they attacked with such force from the front and rear that we were ultimately defeated. I was taken prisoner by the Chinese at that time.

Although my unit had lost contact with regimental headquarters, Regiment knew that we had been attacked and sent a relief force of five tanks and a number of Infantrymen to our aid. Not realizing the nature of the battle which had taken place, this force was surprised to encounter a large Chinese force to the rear of our supposed position, and was completely defeated. The Chinese then drove on toward regimental headquarters, where only the most gallant hand-to-hand fighting and tube-melting massed artillery fire repulsed their attack.

From my vantage point as a prisoner of the Chinese, I observed the conduct of this attack with keen interest. I was able to discover several of the factors which affected the outcome of this infiltration-type attack. In the first place, many of the Chinese troops were former Chinese Nationalists who had defected to the Communists. American trained and equipped, some of them spoke a smattering of English. This no doubt aided them, as they frequently intermingled with friendly troops during the progress of their attack.

Taking full advantage of the limited visibility, our extended frontage, confusion and surprise, the Chinese successfully carried out their operation and seized limited terrain objectives without prior daylight reconnaissance of the terrain and with an apparent minimum of time-consuming prior planning. Further, the enemy was rather poorly equipped by our standards. Lacking radios, they relied heavily on voice commands, bugles and whistles to coordinate their dispersed units. Many Chinese entered the action armed only with crude spears or knives, apparently hoping to pick up, by chance, a better weapon on the battlefield. The ensuing volume of their fire indicated that many of them were successful.

This was the end of my lesson in Chinese tactics, but I can clearly re-

call the timetable of how it all happened. It went something like this:

| | |
|---|---|
| H-hour | Attack is launched by Chinese. |
| H + 15 | Attack meets violent resistance. |
| H + 45 | Attacking regiments infiltrate as individuals. |
| H + 100 | Squad leaders use whistles to assemble squads. |
| H + 120 | Platoon and company commanders assemble units using bugles. |
| H + 140 | Chinese units isolate and attack nearest hostile units. Designated elements occupy defensive positions on ridge to protect Communist units from counterattacks. |

That was it. But what does it all prove? We know from our later experience in Korea that we *can* defend against these infiltration attacks with a well-coordinated, tight-knit defense.

But what about *our* use of infiltration tactics in the offense? Could one of our battle group commanders apply these same techniques in the attack? Is there, in fact, any place in our tactical scheme for use of infiltration?

Apparently, there is; however, so little is said officially about infiltration that it remains a relatively unknown tactic to American commanders. Not only that; there is still some hesitancy about how and when (and whether) infiltration tactics are to be used.

Let us therefore review some of the general principles employed by the Chinese in their offense by infiltration. In so doing, perhaps some light will be shed on how we might use this tactic in the future. At least their experience might serve as a point of departure for us.

Recall first of all that emphasis was placed by the Chinese on rapid movement of individuals through the area of contact to seize shallow objectives which isolated hostile units. There was also an apparent minimum of prior planning and fire support, with emphasis being placed on surprise and team play. Maximum dependence was also placed by the Chinese on the individual and small unit leader. Security from massed firepower was effectively gained through maximum dispersion.

It was apparent that when the Chinese encountered resistance which would require a heavy coordinated attack, the unit literally moved as by osmosis through the opposing forces. Dependence was placed upon the original direction of attack and the immediate terrain features to the rear of the area of contact to furnish direction. And, of course, speed in the attack was essential.

In adding them up, the principles of attack by infiltration in strength, as illustrated here, were relatively simple. The decision as to when the tactic may be used is apparently not quite so simple, however. As the Chinese showed us in Korea, this type of infiltration is optimized under certain conditions, some of which are listed below:

- Limited or reduced visibility exists.
- Trained professional troops and troop leaders are available.
- Intelligence reports are adequate.
- The terrain is compatible.
- The enemy is widely dispersed, with gaps between his defensive positions.
- The enemy is not alert, or lacks the means of detecting movement of individual troops.

(Of course, it should be noted that the Chinese frequently used this type of maneuver even when less than optimum conditions existed.)

Having discussed how and when the Chinese used this tactic, it would seem appropriate at this point to consider how infiltration may fit on the battlefield of the future. It is apparent that the porosity of the nuclear battlefield will invite a maneuver of this type. Since infiltration carries out dispersion to the maximum degree, the offensive unit can present a minimal nuclear target. In fact, when the target is eventually formed, it is so far within the hostile position as to make use of nuclear weapons hazardous.

Certainly the wide dispersion between (and within) defending units will invite frequent use of the infiltration in strength maneuver. Moreover, defense against this movement will continue to be difficult since the individual target is difficult to identify and engage. And since infiltration has built-in psychological effects, it would seem to be particularly usable on a dispersed nuclear battlefield.

From all of this it is evident that infiltration tactics will find wide use on the battlefield of the future. This being the case, it would seem wise for us to review and emphasize this tactic in our offensive training. And certainly this training should not be limited to small units but should include infiltration in strength by battle groups or even larger units. We should not allow this maneuver to stay on the shelf, but should instead add it to the bag of tactical tricks available to the Infantry commander.

If, as the Okinawan proverb says, "Pain makes one think. Thought makes one wise. . . ." then we would do well to recall our painful experience in Korea and gain wisdom from this experience.

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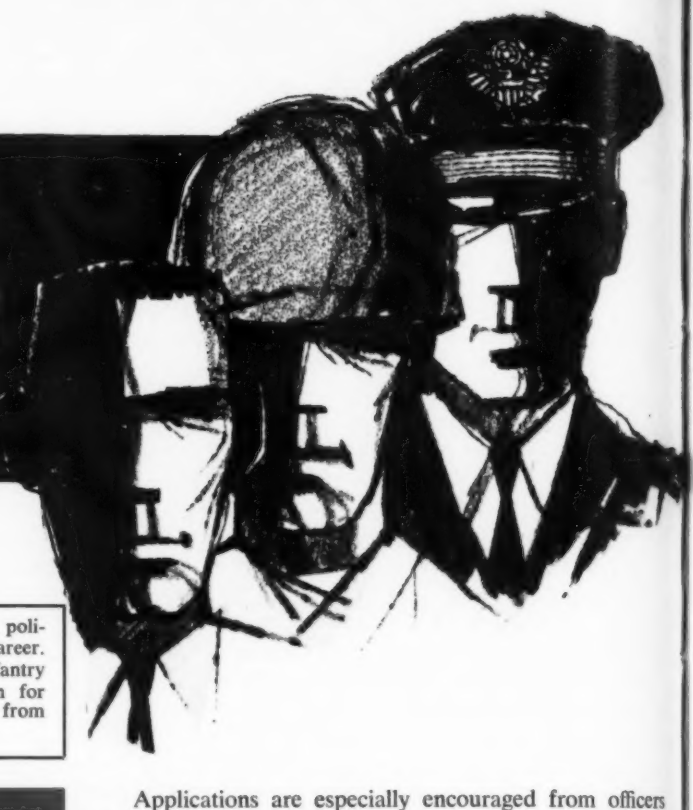
MAJ GORDON SUMNER JR. received his commission at Fort Knox in 1944. After an assignment with the 779th Tank Battalion as platoon leader and company commander, he was assigned to the 2d Infantry Division. He subsequently served with the 6th Infantry Division in Korea and with the 6th FA Battalion. Major Sumner returned to Korea in 1950 where he served with the 77th FA Battalion as an FO and liaison officer. After returning to the U.S. in 1952, he was assigned to the ROTC Instructor Group at Louisiana State University. Joining the 11th Airborne Division in 1955, Major Sumner served with that unit at Fort Campbell and in Germany until 1958, when he moved to HQ, USAREUR, to assume the duties of Advanced Weapons Security Officer. He has just completed the Regular Course at the Command and General Staff College and is also a graduate of the Artillery Basic and Advanced Courses. He is presently with the Department of Defense Atomic Support Agency in Washington, D. C.

# YOUR INFANTRY CAREER



This department provides important information on policies and personnel actions which affect your Infantry career. Material for Active Army officers is furnished by Infantry Officers Division, OAD, DCSPER, DA. Information for USAR officers and enlisted Infantrymen is obtained from other Department of the Army agencies.

## From Infantry Branch

### POSTGRADUATE CIVIL SCHOOLING

AR 350-200 and AR 350-205 establish the Postgraduate Civil Schooling Program and outline the eligibility requirements, areas of study and procedures for application. Applications may be submitted to Infantry Branch at any time and will remain active until the officer is either selected for training, refuses training for which selected, withdraws the application or is no longer eligible by virtue of age. In this regard, Department of the Army policy has established the following:

- Selectees for the social science areas must have completed Command and General Staff College (exceptions may be authorized in Comptrollership only).
- Selectees for the physical science areas must have completed the Infantry Officer Career Course (Advanced Course).
- Applications of nonselectees are automatically returned when the officer reaches age forty.

Selection for attendance under this program is competitive and is based on a comparative evaluation of the records of all officers who apply. An applicant must be highly qualified, as proven by his manner of military performance, and must have an above-average academic record. The normal input periods for training are January and September for the social sciences and June for the physical sciences and Comptrollership.

Applications are especially encouraged from officers who qualify in the physical science areas. The applicant must have an excellent undergraduate record in physics and mathematics, to include calculus. The chances for selection in the physical sciences are better than in the social sciences.

### REGULAR ARMY INTEGRATION

Numerous applications are received at Headquarters, Department of the Army, which do not reflect the current status of the officer's educational progress. Considerable weight is attached by the Regular Army Selection Board to the attainment of a baccalaureate degree. In the absence of such a degree, a dynamic educational program, which indicates that a degree may be forthcoming in a reasonable length of time (either through off-campus activity or attendance under the Final Semester Plan), is given much consideration. It is the responsibility of the applicant to furnish complete and accurate information regarding his qualifications. All officers are therefore advised to furnish transcripts or statements from college or similar competent authorities as inclosures to their applications.

Vacancies exist in most year groups for qualified officers. Therefore, prior nonselection should not be construed as precluding later favorable action. Interested officers should reapply whenever eligible and when additional information is available which adds to their record of qualifications.

## MANDATORY LANGUAGE TRAINING

A mandatory quota, coupled with a shortage of qualified volunteers for language training, may make it necessary for Infantry Branch to assign nonvolunteers to the Army Language School. The mandatory provision is included in a recent revision of AR 611-82, *Selection of Personnel for Language Training.*

An increase in the number of officers undergoing language training makes better utilization of our training facilities and is a big step toward the Department of the Army goal that all career Army officers be proficient in at least one foreign language.

Infantry Branch prefers to send volunteers to language training and therefore needs more qualified applicants, especially for training in Arabic, Chinese, Korean, Persian, Thai and Vietnamese. The schedule of classes and languages available in FY 61 are listed in Department of the Army Circular 621-2, 14 March 1960.

## AVIATION TRAINING

Infantry Branch has been allocated a very limited number of flight training quotas for lieutenant colonels in Fiscal Year 1961. There are no FY 61 quotas for majors and captains, and there is presently no program for training colonels. In spite of the current limited quotas in the grade of captain and above, officers in these grades who wish to apply for flight training are encouraged to do so. Statements of interest will be kept on file and will be considered competitively as quotas become available.

The FY 61 quota for lieutenant is somewhat larger than last year. A recent change in Army regulations requires that newly commissioned Regular Army lieutenants must serve one year with troops before being accepted for flight training. This fact, coupled with a larger FY 61 quota, increases the chances for selection of all other lieutenants who apply at this time.

## INFANTRY COURSE TITLES

Effective with the Fiscal Year 1961 schedule of classes of the United States Army Infantry School, Fort Benning, Georgia, certain courses will have new titles and numerical designations. DA Pamphlet 20-21, *The Army School Catalog,* will be changed to reflect these revisions:

| TITLE | NUMBER |
|---|---|
| Infantry Officer Orientation Course (Formerly Basic Course) | 7-A-C20 |
| Infantry Officer Familiarization Course (New Course) | 7-A-C21 |
| Infantry Officer Career Course (Formerly Advanced Course) | 7-A-C22 |
| Associate Infantry Officer Career Course (Formerly Associate Advanced Course) | 7-A-C23 |

## ADDITIONAL QUERIES

**QUESTION: What is OVUREP?**

**ANSWER:** OVUREP is an abbreviation for Overseas Unit Replacement System. Battle groups are organized in CONUS and after approximately 13 months training they are deployed to replace personnel in battle groups of the 7th Infantry Division, USARPAC, Korea. After a normal 13-month tour in Korea, the unit is returned to CONUS, inactivated, and the officers and enlisted men are reassigned as individual overseas returnees. At the present time the 1st and 2d Infantry Divisions have been designated to organize and train OVUREP battle groups.

**QUESTION: Are there any advantages to being assigned to an OVUREP battle group?**

**ANSWER:** Yes. The OVUREP battle group has continuity of training and continuity of personnel throughout the 26-month OVUREP cycle. Few officers have an opportunity, under present peacetime conditions, to join a newly organized battle group and remain with it until it is inactivated. During this period, the unit will undergo basic and advanced individual training, basic and advanced unit training, deployment overseas, combat readiness training while overseas and deployment to CONUS.

**QUESTION: How can I obtain an assignment in an OVUREP battle group?**

**ANSWER:** Request an assignment to the 1st or 2d Infantry Division on a preference statement (DA Form 483). When you are assigned and arrive in one of these divisions, request an assignment in the next OVUREP battle group.

**QUESTION: I am eligible for retirement in a few years. What are my chances of being assigned close to the area where I will retire?**

**ANSWER:** It is Department of the Army policy to assign an officer as near as possible to the place he intends to retire. However, you must realize that military requirements will preclude this in many cases. This is particularly true in popular retirement areas such as Florida and California. In any event, if you qualify for retirement within four years, you should submit a current preference statement indicating your contemplated area of retirement. Infantry Branch will try to place you as close to this area as the needs of the service will permit. If you are overseas, this preference statement should arrive at Department of the Army not later than seven months before you are scheduled to return to CONUS.

**QUESTION: I am an Infantry lieutenant and I have not been overseas. How long will I remain assigned to my station in CONUS?**

**ANSWER:** Normally, you will remain assigned to a CONUS station from 18 months to two years. However, there is an exception to this: if you are an aviator, you may be reassigned overseas after you have been on station from one to two years. In the future, many lieutenants who are eligible for a short overseas tour will be assigned to OVUREP units.

**QUESTION: What are my chances of obtaining an Attache assignment?**

**ANSWER:** There are few Attache requirements for captains and majors. Your chance is better if you are in the grade of lieutenant colonel or colonel.

**QUESTION: What are the qualifications for a MAAG or Mission assignment?**

**ANSWER:** You must be a graduate of the Infantry Officer Career (Advanced) Course (Associate or Regular), Fort Benning, Georgia, and must be in the grade of captain or higher. The only exceptions to this are lieutenants assigned as *aides-de-camp*.

**QUESTION: What are my chances for an assignment to the Joint Staff, Department of Defense?**

**ANSWER:** A great number of joint staff positions in the Department of Defense are filled from the DA general and special staff. It is unusual for officers to be assigned directly to joint staff without previous Department of the Army level staff experience.

**QUESTION: Will I be assigned to a second overseas short tour area?**

**ANSWER:** The answer to this question depends on two factors: your present grade and short overseas tour requirements. The list of Infantry lieutenant colonels who have not had a short tour since June 1950 is nearly exhausted. A second short tour cycle for Infantry majors began in February 1959. Infantry captains and lieutenants are not being assigned to a second short tour unless they volunteer.

To be eligible for a second short tour, an officer must have had an intervening tour in an overseas area where his dependents are authorized. Lieutenant colonels who have not served an initial short tour will be assigned to a short tour area as soon as they become available. Generally, the first to return from his initial short tour will be the first assigned to a second short tour; this cannot be strictly adhered to because of the problem of availabililty, and because of special short tour requirements which require special skills or qualifications.

**QUESTION: If an officer's indefinite category agreement is revoked, does he have any recourse?**

**ANSWER:** No. Records of all officers on active duty, less those serving on term commitments, are screened annually under the provisions of Section XV, AR 135-173. Those officers failing to meet acceptable standards of efficiency or conduct are recommended for relief from active duty, and their records are referred to the Department of the Army Active Duty Board for review and determination. This Board compares the entire record of the officer concerned with those of his contemporaries. The Board's decision is final, and it is not required to divulge the reasons for such a decision.

**QUESTION: I am a Reserve officer who will complete 20 years for retirement purposes in Fiscal Year 1963. If I am not selected for retention on active duty, does this mean that I must retire?**

**ANSWER:** No. Although it is mandatory that you be relieved from active duty the last day of the month following the month in which you complete 20 years active duty, you have several courses of action available to you. You may retire, revert to the inactive reserve, revert to Regular Army warrant officer status (if applicable), or enlist in the Regular Army. If you revert to inactive reserve status, you will not receive any compensation but will be eligible for USAR promotion. If and when you are promoted in the Reserve, you can request retirement in the newly appointed reserve grade. If you enlist, the same is true; you remain eligible for promotion in the USAR and may request retirement at any time regardless of enlistment agreement.

**QUESTION: What is the current promotion picture?**

**ANSWER:** All Regular Army promotion selection boards for 1960 have adjourned. Recommended lists have either already been published or will be shortly. New selection boards for Regular Army promotion to the grades of captain, major and lieutenant colonel will convene in the spring of 1961; the board for colonels will convene in December 1960. Methods of selection will be the same as for 1960, that is, "best qualified" for all grades except captain. Promotion to captain will again be on a "fully qualified" basis.

The 1960 AUS promotion picture is as follows:

| Grade | Board Convened (s) | Primary Zone |
|---|---|---|
| Captain | June 60 | 31 March 58 |
| Major | May 60 | 31 March 54 |
| Lt Colonel | May 60 | 30 June 53 |
| Colonel | September 60 | 30 June 51 |

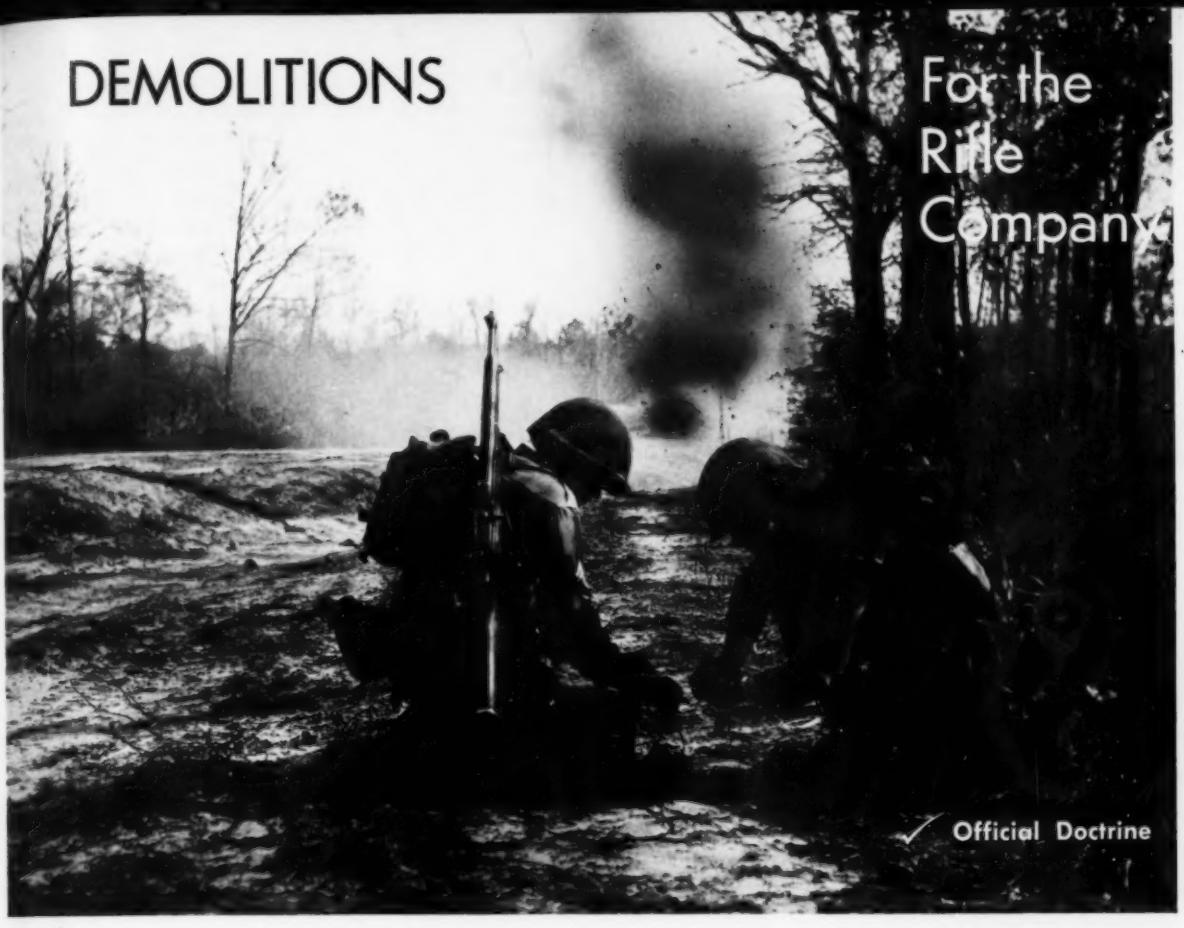
The methods of selection are the same as for Regular Army promotion.

USAR promotion selection boards will meet as indicated below:

| Grade | Convened (s) | Eligibility for Consideration | |
|---|---|---|---|
| | | Time in Grade (yrs) | Comm Sv (yrs) |
| Captain | July 60 | 4 | 6 |
| Major | October 60 | 7 | 12 |
| Lt Colonel | November 60 | 7 | 17 |
| Colonel | March 61 | Not Announced | |

Method of selection will be "fully qualified" for all grades except colonel. The latter will be on the "best qualified" basis.

# DEMOLITIONS For the Rifle Company




Here are some little-known facts about the company's new explosive capability.

by Capt Frank H. Armstrong

IF THERE ever *is* a battlefield of the future, the chances are pretty good that the average rifle company will have a great need for *organic* demolitions. Some of the missions which would probably fall to such a unit would be these:

- Destruction of bridges
- Felling of trees to form abatis
- Clearing lanes through tree blow-down areas
- Breaching minefields, barbed-wire, etc.
- Cratering of roads.

Of course, the list could go on for the better part of a page, but it would only emphasize what has already been said—that the rifle company *must* have an organic demolition capability.

Fortunately, it does—but this is not the end of the problem. For although each rifle company is now authorized, by TOE, a considerable demolition capability, this does not accomplish the blowing of bridges, felling of trees and other tasks previously mentioned.

The boxes of demolitions and other paraphernalia are there (usually in a dark corner of the company supply room or annex), but the capability is not. The fact is that too few Infantrymen know what demolitions equipment is in the boxes or how it is used. To help reduce this information gap *and to cover the data and "tricks of the trade" that are NOT presented in field manuals,* let us go through the demolition set and discuss its principal components as well as some of their uses, capabilities and limitations. (Again, the emphasis will be on "tips" which are not in the FM but which increase the demolition set's potential.)

As a good starting point, it should be noted that the new demolition set contains 150 pounds of explosives whereas the old rifle company demolition set contained less than 1/6th of that amount. This, however, is not the whole story, for versatility is another big difference.

Since the primary components of this set (which is known as the Demolition Equipment Set, Explosive Initiating, Electric and Nonelectric) are expendable, there is very little limitation on the extent to which it may be employed. The 100 pounds of composition C4 in the set is only 2½ cases; however, explosives are issued in full-case units, and the company will frequently have 120 pounds of C4 plus 50 pounds of TNT in its basic load.

The *TNT* is a comparatively low-cost, insensitive, high-powered, all-purpose frontline explosive. It can be employed under water and is so insensitive to shock that a high order detonation can be assured only by using a special military blasting cap or two contiguous commercial caps. There is very little danger of accidental detonation from a rifle bullet impact. Moreover, in the event that TNT catches fire, it will usually not explode when the quantity is less than 500 pounds. The fumes from exploding TNT are poisonous; therefore, it should not be used in any situation where the fumes might be contained and subsequently breathed by personnel.

TNT can be stored for periods up to 20 years, and if it has not been exposed to prolonged dampness or prolonged tropical temperatures, it can still be successfully detonated. TNT is usually issued in 50 one-pound blocks per case, and one case is authorized per rifle company. As Figure 1 indicates, the power of this explosive adds considerably to a rifle company's potential.

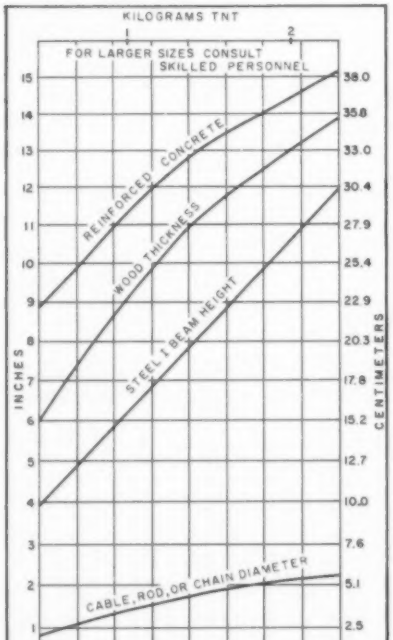



**Figure 1. Cutting capability of TNT.**

CAPT FRANK H. ARMSTRONG graduated from Field Artillery OCS in 1942. From 1943-45 he served with the 283d FA Battalion as a reconnaissance officer, battery executive officer and battery commander. After a four-year period in the inactive Reserve, he returned to active duty in 1949 and attended the Artillery School Advanced Course and the Engineer School Basic Course. Captain Armstrong was with the 1st Cavalry Division in Korea in 1950-51. He has been an instructor at the Army Engineer School and is now an instructor in field engineering at the Infantry School.

*Composition C4* is more powerful than TNT and costs approximately twice as much. C4 is also less sensitive and can be employed under water. In addition, it is adaptable to long-time storage, is pliable and can be molded into any desired shape. It is interesting to note that neither the heat of the tropics nor the Arctic cold prevent the user from effectively molding C4.

Composition C4 is usually issued in 2½ pound blocks which are roughly equivalent to three pounds of TNT. The C4 may be employed in any amount, but it is difficult to secure a high order explosion with quantities less than ¼ pound. It is the ideal explosive for steel cutting and has an additional advantage in that the fumes resulting from detonation are only slightly dangerous.

*Detonating cord (trade name: Primacord)* provides the most reliable means of connecting charges when simultaneous detonation of the charges is desired. Since detonating cord is inexpensive and effective underground or water, a resupply of this expendable explosive will frequently be necessary.

One fact of interest to Infantrymen is that the new plastic-covered detonating cord is *not* efficient at tree cutting. Usually, 12 tight turns around a tree 12 inches in diameter will remove only a ring of bark. However, the new cord can be used to remove the top of an empty 55-gallon drum. Three turns of detonating cord around the top of the drum will normally be enough. A word of caution: detonating cord explodes with a flash that usually will ignite any flammable substance.

*Time fuse* in the demolition set must be protected from moisture since its interior core of black powder will rapidly absorb atmospheric or other moisture. If this occurs, the time fuse will not burn. The fuse was designed to burn at the rate of 40 seconds per foot; however, there may be a variance of up to 15% because of altitude, temperature, humidity or other factors. *The rate of burning of time fuse should always be tested in advance.* This test burning is of extreme importance when working with foreign explosives, since some countries employ *instantaneous* fuse that burns from 120 to 200 feet per second.

Maltreatment, such as crushing the fuse, can delay fire or cause a hang fire or a premature firing. One other important tactical consideration is that burning time fuse emits considerable smoke and can be clearly observed from as far away as 100 meters.

As its name implies, the *M1 friction fuse lighter* is used to ignite time fuses. The word friction should be emphasized, since the lighter will not activate without a healthy jerk of its pull pin. *A slow, steady pull on this pin will not ignite the lighter.*

As a matter of interest, most sets now have the new *M2 fuse lighter* which will light a time fuse without any visible spark or flame; of course, the burning fuse *will* emit smoke. Prior to employing the M2 fuse lighter, the user should squeeze the spread ends of the pull pin together in order to facilitate the removal of the pull ring. In addition, at least one inch of time fuse should be clipped off with a dry fuse cutter just prior to inserting the fuse into the fuse lighter. This is insurance against malfunction caused by moisture. Also, the fuse must be inserted a full inch into the lighter; if it is not, the built-in fuse retainer in the lighter will not function.

The 50 small *nonelectric blasting caps* and the 50 *electric blasting caps* are the most important and the most dangerous items of the set. A high order detonation of C4, TNT, Detonating Cord, or the universal destructor (which is discussed below), can be assured only through the use of one of these special military blasting caps. *There is no field expedient!* Although C4 molded around a firecracker will sometimes explode, this only happens occasionally, and even then the explosion is of a very low order.

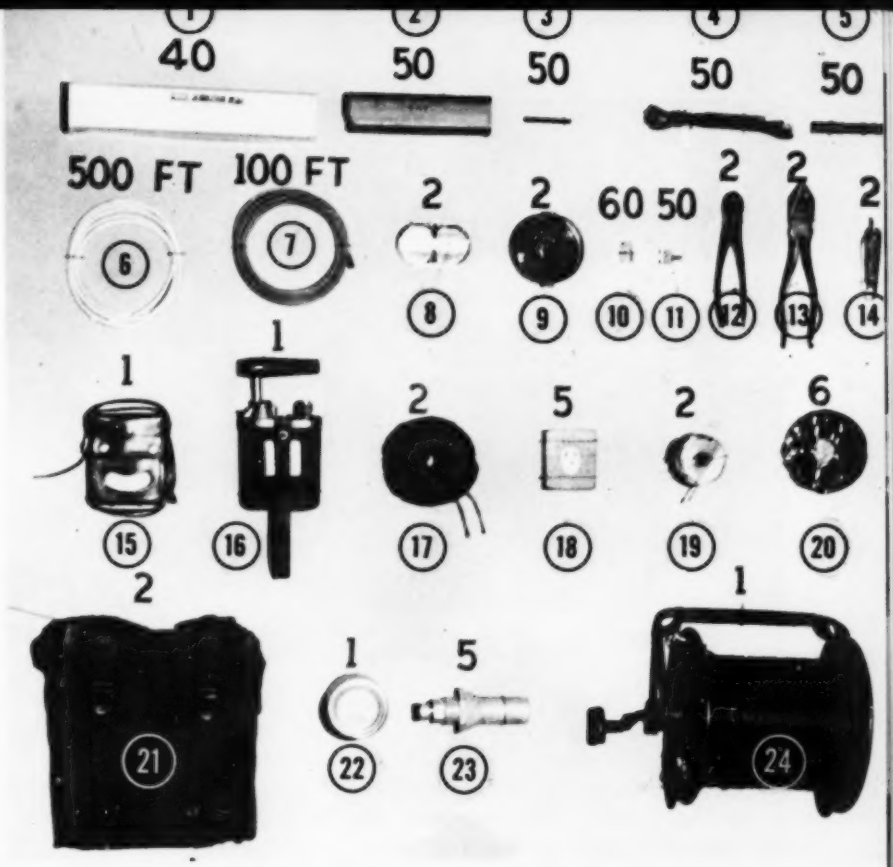
The power of a single blasting cap can be illustrated by drilling a hole in a three-inch diameter log and then detonating a cap inside the log. Shattered log particles will be blasted out to a distance of 30 meters.

These caps are sensitive to shock, heat and flame. They are best protected by use of the felt-lined, nonelectric blasting cap wooden boxes. The caps are always stored and transported separately from the explosives.

The five expendable *universal destructors* (an explosive item) give the rifle company the capability of detonating mortar and artillery shells by using either the electric or the nonelectric blasting cap.

Insulation tape, sealing compound, adapters, detonating cord clips, adhesive paste, twine, electrical wire and the canvas carrying bags are the remaining expendable components, and their use requires no detailed explanation beyond that already contained in FM 5-25.

Additionally, each set contains a few nonexpendable items (knife, pliers and computing tape) which are fully described in the FM. While these and other items are discussed in great detail in the FM (and therefore will not be covered in this article), little mention is made of the substitute items which may be used in the event that the company commander wishes to expand his set so that several demolition teams can function concurrently. For example, the *firing wire* can be replaced by regular communication wire. The all-




**Components of Demolition Set** are as follows and correspond to *circled* numbers in photograph above:
① Composition C4; ② TNT; ③ Non-electric blasting cap; ④ Electric blasting cap with lead wire; ⑤ M2 fuze lighter; ⑥ Detonating cord; ⑦ Time fuze; ⑧ Computing tape; ⑨ Adhesive paste; ⑩ Cap adapter; ⑪ Detonating cord clip; ⑫ Cap crimpers; ⑬ Lineman's pliers; ⑭ Pocket knife; ⑮ Galvanometer; ⑯ Blasting machine; ⑰ Hemp twine; ⑱ Cap box; ⑲ Electrical wire; ⑳ Electrical insulation tape; ㉑ Carrying bag; ㉒ Sealing compound; ㉓ Universal destructor; ㉔ Firing wire on reel.
*Note: Numbers not circled (above items) denote quantity of each item in set.*

copper firing wire does have less resistance, but the communication wire has greater tensile strength. However, this warning should be remembered: The use of communication wire increases the possibility that a telephone testing crew may unintentionally ring in on a demolition circuit with surprising results.

The *blasting machine* can be replaced by the BA 279 radio battery from the PRC 10 radio. As a matter of fact, the 135-volt connections from these batteries will fire a charge over 2500 meters of communication wire, whereas a good blasting machine is limited to 500 meters. These radio batteries can be connected in series for greater distances, but if more than two are used, the voltage will be so great that the insulation and the wire will be overheated, resulting in brittleness, breaks and short circuits.

There is no substitute for the *galvanometer* which sends just enough electric current through the blasting cap to test it, but not enough to fire it.

Another important fact that should be remembered is this: The *cap crimpers* in the set are made of a soft, non-sparking metal, and *do* have a tendency to wear out. If worn crimpers should cut rather than crimp a blasting cap, the highly sensitive explosive in the cap may explode. (The closer the cut is made to the explosive filler, the greater chance there is for an explosion.) Because of this fact, worn cap crimpers should be replaced.

**A drum of napalm and a shaped charge can be rigged and camouflaged to form an effective directional napalm fougasse device.**

## SPECIAL PACKAGED CHARGES

*Shaped charges, bangalore torpedoes,* and *cratering charges* are also expendable ordnance explosive items which are available to the rifle company on request. These special charges are not a component of any demolition set, but are carried as a part of the basic load by some units. For example, the battle group basic load includes 30 shaped charges. In the event that a rifle company commander has a need for shaped charges, bangalore torpedoes or cratering charges, he can obtain them in the same manner as hand grenades or ammunition.

From the foregoing brief description of demolitions available to the rifle company, it is evident that the company now has a strong demolition "punch" to accomplish many battlefield tasks. In point of fact, the employment of explosives by the rifle company is limited only by the imagination, ingenuity and the status of training of the individual Infantryman. This point is borne out when we examine how some of these explosives may be used.

In any defensive situation, the strength of the position can be considerably increased by employing components of the demolition set, special packaged charges, artillery shells and napalm. For instance, let us consider a likely avenue of approach into the company area—a wooded ridge line. The enemy activity in this avenue can be severely limited by this simple procedure: Obtain several artillery shells, carefully calculate the friendly troop safety distance and then emplace and camouflage the artillery shells on the ground or up in the trees. After replacing each fuse with a universal destructor, install and camouflage wires to the position area; your homemade "artillery barrage" is complete. When listening posts disclose that the enemy is within the killing zone, outposts are warned and the shells are fired. The first "round" is always "on target."

These shells could also have been rigged with trip-wire actuating devices. However, they would then have constituted an activated improvised mine, which requires the battle group commander's approval and a minefield report. Furthermore, friendly patrols would have to avoid the area because of the possibility that an animal, a falling branch or an enemy patrol might activate the shells while they were within the danger area.

Booby traps can only be authorized by the Army or higher commander. However, this improvised "artillery barrage" is not considered a booby trap because it is not activated by the disturbance of an apparently harmless object or through the performing of a presumably safe act (FM 31-10).

A directional napalm "fougasse" device could also be used on likely avenues of enemy approach. For example, a 55-gallon drum of napalm

**Antipersonnel weapons may be constructed from multi-perforated 106mm shell casings and C4 explosives.**

could be installed and camouflaged on the approach with a shaped charge positioned two meters away so that it will fire through the drum in the direction of the enemy. This can be activated either by trip wires or electrically from within friendly lines. The device behaves somewhat like a remote controlled flame thrower.

The multiperforated 106 mm shell case can also be used as an antipersonnel weapon. Several expended shell cases can be camouflaged and emplaced close to the ground on likely avenues of enemy approach, with a block of composition C4 inside of each.

These antipersonnel traps can be primed to fire electrically from a friendly position, or they may be fired by trip wires. Composition C4, with its high detonating velocity, ruptures the cases in many jagged portions, some of which are lethal up to a distance of 70 meters.

Bangalore torpedoes may be employed in a similar manner in a defensive position. Emplaced vertically, they are easy to camouflage so that they resemble small trees or parts of trees. They will constitute a better weapon if the fragmentation is increased by tying around them additional pieces of metal such as barbed wire pickets.

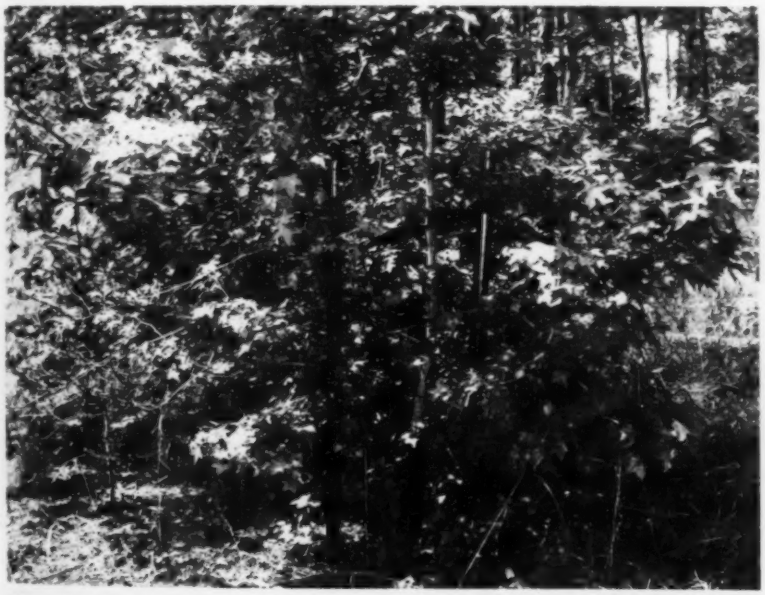
**The extent of the company's demolition capability is limited only by the ingenuity, imagination and the training of the unit.**

Laying a shaped charge down on its side also presents many new possibilities for its use. It is true that the shaped charge attains maximum penetration when it is placed at the proper standoff distance; however, it still has some destructive effect at much greater distances.

The 40-pound shaped charge, with an optimum standoff distance of 15 inches, will penetrate two inches of armor plate at a distance of 12 meters. Hence, the charge could be set up on a likely tank approach and, by using a pressure-type firing device, it could act as an effective light antitank weapon. Its fragmentation can be increased by filling the hollow cone with small pieces of metal or gravel. Thus loaded, the shaped charge will breach a barbed wire entanglement 10 meters away and will inflict casualties on dispersed enemy troops to a distance of 50 meters.

As the foregoing paragraphs indicate, there is a considerable amount and variety of demolitions available to the rifle company. This wealth of demolitions is so great—particularly in comparison with past authorizations—that it dramatically increases a rifle company's potential.

To give this potential true meaning, however, all Infantrymen must know these essential "tricks of the trade" as well as how and when these demolitions are best used. And this can be learned only through continued practical work. This is the real key to effective use of rifle company demolitions.



**Bangalore torpedoes are an effective antipersonnel weapon and may be emplaced vertically and camouflaged to blend with small trees in the background.**

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*This article is in consonance with current doctrine as taught at the United States Army Infantry School.*—Editor

# The Silent Avenue of Approach

*Does the Army's mobility stop at the water's edge?*

by 1st Lt Bruce A. Keppel

THE AVENUE of approach to the objective has been a critical aspect of almost every military operation from Ticonderoga to Heartbreak Ridge. Because of this, today's Infantryman is schooled in movement over almost every conceivable type of terrain under varied conditions of light and weather.

It is disquieting, then, to learn—or to recognize—that there is an important movement which is known to few and which is not being taught in our schools or our training programs.

This movement is swimming—pleasurable pastime for millions, but a basic combat skill for Infantrymen. The ability to move through water is certainly desirable; for the Infantryman it is essential. If you, too, believe that swimming is a skill which the Infantryman must master, make a check of your unit to see how many men you could honestly count on for a patrol which required their swimming across a river in total darkness, taking full patrol gear with them.

If you come up with one man per squad, you have an above-average unit. A third, a half, or perhaps even more of your men might say they can swim—but recreational or "swimming hole" swimming is an art far removed from the science of *military* swimming.

What is *military* swimming? How does it differ from the recreational version?

Essentially, military swimming involves not only certain swimming skills, but *other* skills employed in the water. The military swimmer must know how to cross all types of streams, move through surf and swim silently and tirelessly with his combat load. He must also know lifesaving techniques, how to inflate clothing, handle small craft, and so on. Put another way, the expert military swimmer is one who never views a body of water as an obstacle, but always views it as an avenue of approach. He is well-versed in the three primary aspects of military swimming—tactics, survival and lifesaving.

Tactically, the well-trained military swimmer smoothly executes any river

crossing or amphibious operation. He uses water to advantage in infiltration, and his aquatic ability considerably increases his value as a patrol member.

In survival, he is keenly aware of the potentialities inherent in a body of water—for evasion, as a source of food or as a route of escape. He also knows how to survive at sea.

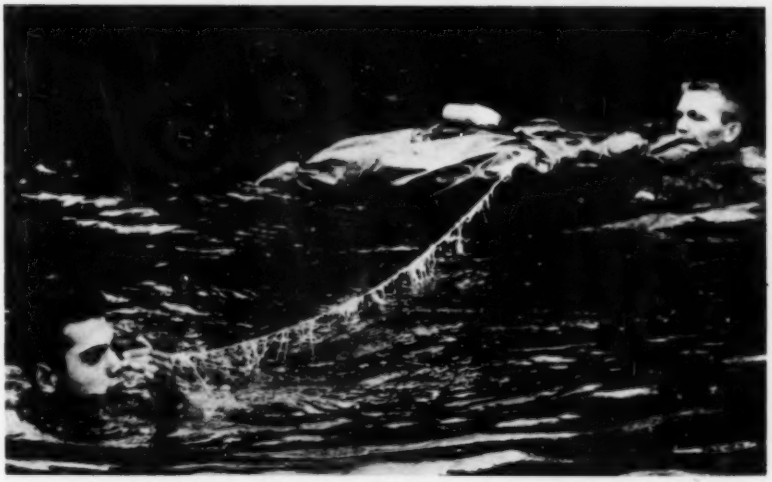
Finally, he knows his lifesaving capabilities and limitations. He realizes that while any man can make certain rescues, others are best left to the expert. He therefore endeavors to become an expert after he has mastered the basic swimming skills.

Clearly, then, if the Infantryman is to realize his full potential, he must be thoroughly trained in every aspect of this basic means of movement. In view of this, we may well ask ourselves how we now stand in the training of military swimming.

An officer, recently returned from duty with special forces overseas, reported his amazement and disappointment when a significant number of hand-picked soldiers proved themselves unable to carry out an air drop over water. The operation should have been routine, but too few of them had sufficient ability to handle themselves or their combat loads in water. These soldiers had been considered swimmers, and, in a militarily useless sense, they were. From a military standpoint, however, they could not swim.

This example is not an isolated one, and it is not particularly startling when you stop to consider that many Infantry trainees receive no swimming instruction in basic combat or advanced individual training. In fact, in the respective Army Training Programs, periods of instruction in swimming are not specifically scheduled, and there is only vague reference that swimming instruction for non-swimmers should be provided "where weather and facilities permit." Too often, they do not "permit."

In other than basic training units, conditions and results vary. If a unit has aquatic facilities available, some swimming training may be accomplished during the annual training cycle. Unfortunately, however, this is the exception rather than the rule. In the main, we are still falling short of the desirable goal of making every Infantryman—in fact, every soldier—a military swimmer.



**Swimming patrol members near an enemy position . . . using the silent avenue of approach.**

One example of what *can* be done to reach this goal is illustrated by the swimming program integrated into the Basic Combat Training program at the Sixth U. S. Army Training Center at Fort Ord, California. Here, the swimming program consists of a five-hour course, taught in segments not longer than two hours. In the first hour, swimming is related to the other cover and movement techniques already learned, and the aspects of military swimming are explained and demonstrated. The trainees then perform a swimming test. Those who fail the test are subsequently given three hours of intensive instruction geared toward passing them into the intermediate level. The final hour, like the first, is presented to the entire unit. It is a continuation of the first hour, and contains instruction on survival, lifesaving and general tactical uses of swimming. The emphasis, of course, is on *military* swimming skills.

Fort Ord's program is simple, yet effective, within its limitations. Similar programs could readily be set up at other training centers and at other troop locations.

Before this can be done, however, three major problems which currently impede implementation of swimming programs must be overcome. The problems are these:

•Lack of facilities: Many Army pools are designed for use solely as open-air playgrounds. These provide pleasant recreational facilities for about three months a year in most localities. For the remaining months, however, they are drained and useless. This waste was handily eliminated at Fort Ord when the outdoor

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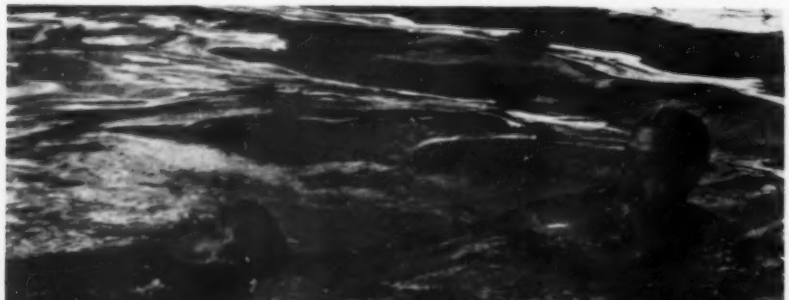
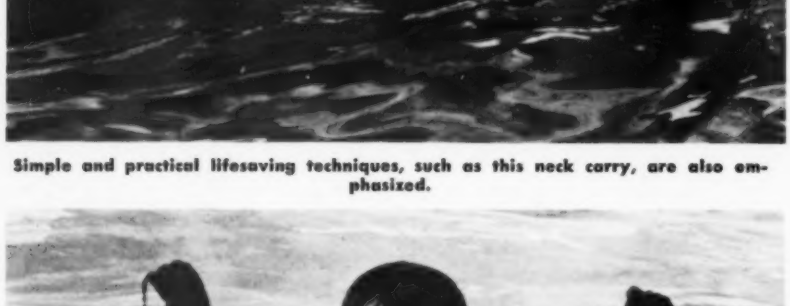
1ST LT BRUCE A. KEPPEL received his commission in 1958, graduating from the University of California. After attending the Infantry Officers Basic Course at Fort Benning, he was assigned to Fort Ord as a platoon leader in the 8th Battle Group, 3d Brigade (Training). He was a candidate for the U.S. Army Pan-American swimming team in 1959, and has been a member of the All-Army swimming team for the past two years. He is presently assigned as assistant OIC, Trainfire General Subjects Committee, 3d Brigade, Fort Ord, and is now a candidate for the Olympic swimming team.

In Fort Ord's training program, men are taught to move themselves and their equipment across water.



Simple and practical lifesaving techniques, such as this neck carry, are also emphasized.



Other techniques which are taught include the use of inflated trousers as a life preserver.

(and only) pool was made into an indoor, year-round versatile training site. Perhaps it would pay great dividends to have all swimming pool construction geared to this same principle—utility in *training* as well as recreation.

•Lack of training material: Another problem exists in that there is no single, definitive Army text on military swimming. The best material, though it is incomplete in treating all aspects, is found in the American Red Cross manuals. Ideally, the Army's manual should be geared to combat swimming and should contain the best available information compiled from research by universities, as well as by the Navy, the Red Cross and other agencies. Suffice to say that some manual must be written for the *military* swimmer.

•Shortage of qualified instructors: At Fort Ord, there is continual difficulty in finding and keeping NCOs capable of teaching swimming. A good NCO can be trained to perform almost any job, but at post level, time and manpower are too limited to conduct an effective swimming instructor training program. Thus, higher headquarters (perhaps CONARC) should see that aquatic schools are held frequently enough to produce and maintain the number of duly certified instructors needed to operate a year-round, world-wide military swimming program. Until sufficient military swimming instructors become available, the resources of other agencies (including the American Red Cross corps of volunteers) should be utilized.

The important point to all of this is, of course, that our soldiers must wet their feet in military swimming long before their missions demand that they wet them in some swamp, stream, or surf, and before circumstances force them to swim to survive. After all, oceans and streams are part of the soldier's domain. To him, water is but another means to an end.

To help him use this means—this silent avenue of approach—we *must* make him swim.

# AUSTERLITZ

A lesson in *Mass*
from
its most creative disciple.

by Lt Col William F. Long Jr.

IN WAR, the principle of Mass is masculine and dominating — the complementary opposite of Economy of Force. In fact, in many great battles mass has been made possible by the deception inherent in the principle of economy. But mass does not *depend* upon economy. For more than any other principle, mass is both the tool and product of an inspired military intellect.

All great Captains of history have understood the primacy of mass as the controlled application of superior battle power at the point and time of decision. This understanding, combined with an appreciation for the capability of a particular army and the technology of the times, constitutes much of the art of generalship in any age.

The master of mass—its most creative disciple and most articulate prophet—was the Corsican, Napoleon Bonaparte. He established the point where modern war began. Therefore, it is significant to modern military leaders that so much of Napoleon's contribution to the art of war was in the application of mass. Why? Because in these opening days of the thermonuclear age, there are serious doubts voiced regarding the validity of the principle of mass for wars of the future.

Perhaps those who question the validity of the principle are thinking of mass in terms of the helpless Roman mass-turned-mob packed into a slaughter pen by their inept commander, Varro, who made Hannibal a legend at Cannae. The doubters are not watching Napoleon, the wielder of mass at Austerlitz. It was here that Napoleon displayed the full power of his personality and gave the principle of mass a new dimension—an overtone of momentum—a certain kinetic quality that will have meaning so long as war remains an element of human society.

Austerlitz cannot be isolated and studied alone, however. It is necessary to trace the path from late November 1805, when Napoleon, the new Emperor of the French, consummated the greatest strategic penetration up to that time. His operations had rapidly carried him some 400 miles in a straight line from Boulogne (where he was menacing England) to Ulm. At Ulm he destroyed Mack's Austrians—but in the very rapidity of his move, his enemies thought they detected the seeds of his defeat.

Still, undeterred by his extended line of communication and a growing shortage of supplies, he followed victory at Ulm with the capture of Vienna. And then he pushed forward to seek out and engage the Allied Russo-Austrian Armies east of Austerlitz. It was here that Napoleon contemplated the Allies' ruin.

Strategically, his French forces (from their central location) could concentrate more quickly than any combination the Allies could muster. However, all the Allied planners could see was Napoleon's French Army to their front—numerically inferior and apparently greatly

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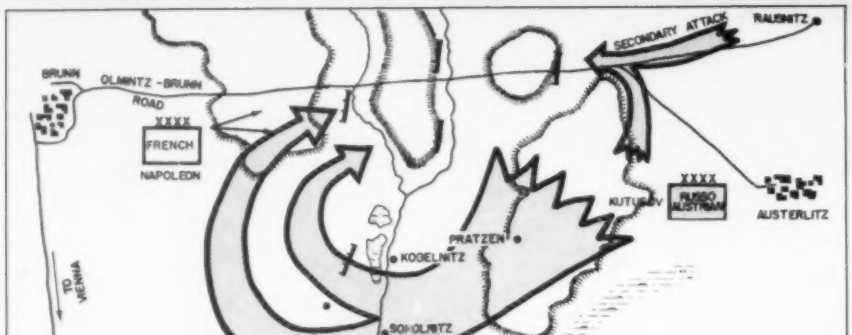


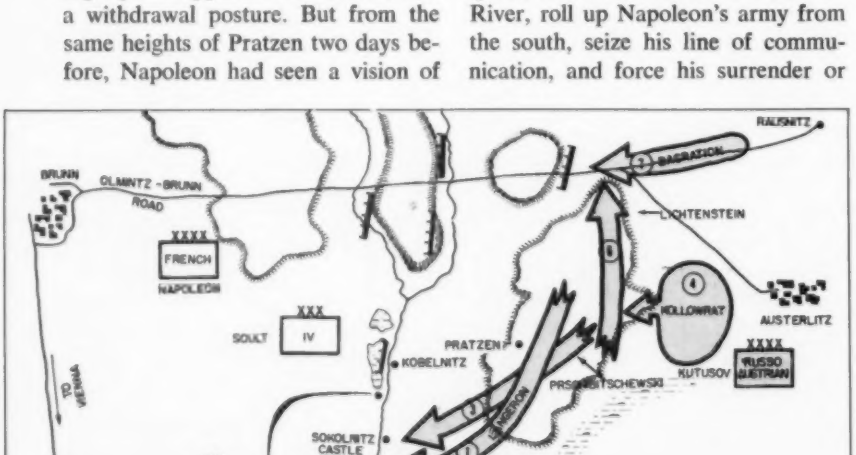

Map 1.

overextended. Napoleon deliberately fostered the Allied assumption that a line of communication to Vienna was his chief concern.

Napoleon initially withdrew to a strong defensive position on the heights of Pratzen and, simulating a classic reaction to probing by superior forces, he withdrew again. Attributing his withdrawal to conventional, logical, military custom, the Allies, who had quickly occupied the commanding heights of Pratzen, saw opportunity beckon. They could turn Napoleon's weak, strategic right (southern) flank (Map 1), drive him off his line of communication, and forge a battle of Ulm of their own.

Napoleon granted both the heights and the vision to his enemies. He further indulged their wishful thinking by an apparent continuation of a withdrawal posture. But from the same heights of Pratzen two days before, Napoleon had seen a vision of his own: A vision of attacking Allied armies broken into two segments by a crushing French mass attack to seize the heights of Pratzen; a vision of massed French artillery mounted on the Pratzen heights, sweeping windrows through tightly packed Allied ranks caught between his army and the ponds and swamps well within cannon range to the south. Napoleon also saw a vision of his massive might between the wings of the Allied armies accomplishing a tactical penetration similar to the strategic masterpiece of Ulm.

Weyrother, the Austrian Chief of Staff, drew up the Allied plan—and on paper the scheme looked good (Map 1). The main Allied attack would shift off of Pratzen, move *across* the front of the supposedly quiescent French, force the Goldbach River, roll up Napoleon's army from the south, seize his line of communication, and force his surrender or rout. A secondary attack along the Olmintz-Brunn road would hold the upstart French Emperor on the chopping block.




Map 2.

An eyewitness reports that Kutusov, the senior Russian general, slept through the Allied plans briefing. And he might better have stayed awake—for he was to execute the plans in the name of Alexander of Russia. As Kutusov later learned (to his immortal shame), plans which appeared good on paper often failed to take into account the aggressive personality of Napoleon I.

Napoleon was overjoyed when the intention of the Allies became manifest. He confidently announced victory to his soldiers a day ahead of time—in the name of Napoleon I—and in honor of his first anniversary as Emperor. Thus, the Battle of Austerlitz unfolded according to plan on 2 December 1805, but the script, with the cues, was in the hands of the principal actor, Napoleon.

At approximately 0700 hours, the First Allied Column under Langeron (①, Map 2) moved from the forward Allied position on the Pratzen heights and began a four-mile march to the southwest to join Docturov's Second Allied Column (②, Map 2) in a combined 20,000-man assault. Their objectives were the Goldbach River crossings at Tellnitz and Sokolnitz. Prschibitschewski, commanding the 14,000-man Third Column (③, Map 2), also moved off the heights of Pratzen and started a five-mile move to the southwest to seize the Goldbach crossing opposite Sokolnitz Castle. Shortly thereafter, Kollowrat, whose 25,000-man Fourth Column (④, Map 2) was to complete the attacking Allied left wing, started his movement across the plateau on Pratzen heights.

By 0900 hours the Allied plan seemed to be going according to expectation. The weak French right composed of Legrand's 9000 men was giving ground, and the crossings at Tellnitz and Sokolnitz were in Allied hands. Even the attack in the south (on the Allied left flank) by Marshal Davout and his 8000 men (⑤, Map 2) served only to

strengthen the Allied belief that Napoleon was desperately trying to protect his right. But, far from desperate, Napoleon stood with Marshal Soult, commanding the French IV Corps, and calmly surveyed the rapidly emptying Pratzen heights before him.

Turning to Soult, he asked, "How long will your troops take to ascend the Pratzen Plateau?" The Marshal replied, "No more than twenty minutes."

"In that case, let us wait for another quarter of an hour," Napoleon rejoined.

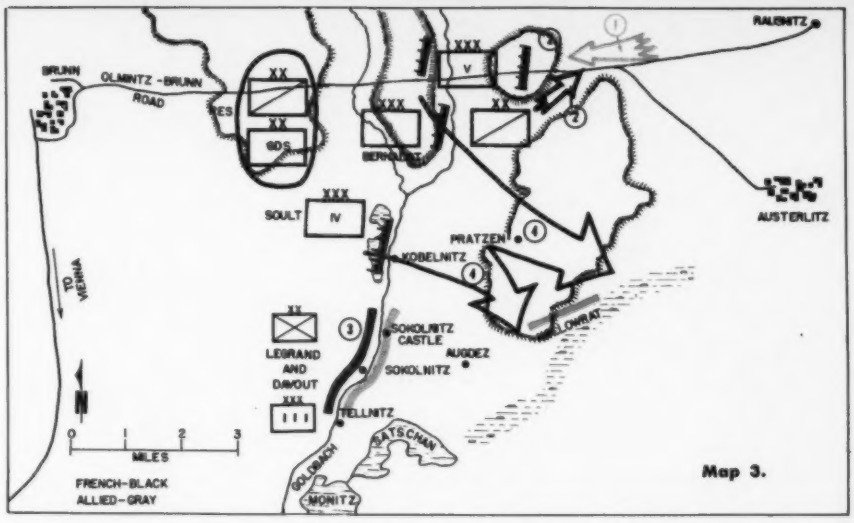
While Napoleon stood and awaited the moment to loose his blow, a cavalry unit ( (6) , Map 2), attempting to make its way north across the plateau to join Bagration's secondary attack ( (7) , Map 2), was becoming entangled with Kollowrat's troopers. This almost classic example of poor staff work led to a sharp verbal exchange between Kutusov and the Russian Czar that did nothing to clear the situation—a situation rapidly deteriorating and about to collapse.

The secondary attack ( (1) , Map 3), designed to hold the French on the Olmintz road, was stopped by the French Reserve Cavalry and V Corps ( (2) , Map 3). Down in the Goldbach Valley, Davout and Legrand ( (3) , Map 3) were holding before odds of three to one.

*The moment had come:* Soult and Bernadot ( (4) , Map 3), with 29,000 men between them, stormed up the Pratzen heights, out of the concealing fog and into the legendary sun of Austerlitz. In so doing, they drove a wedge into the Allied center and placed Napoleon's artillery above and to the rear of the Allied main attack.

Davout and Legrand ( (1) , Map 4), who had held tenaciously in the face of the Allied main attack, now felt a lessening of the pressure and were able to shift to the attack. The village of Tellnitz changed hands three times in bloody hand-to-hand combat and then fell at last to the French.

The escape route to the south was closed, and by 1400 the ruin of the Allied left was assured when Soult's forces captured Augdez ( (2) , Map



Map 3.

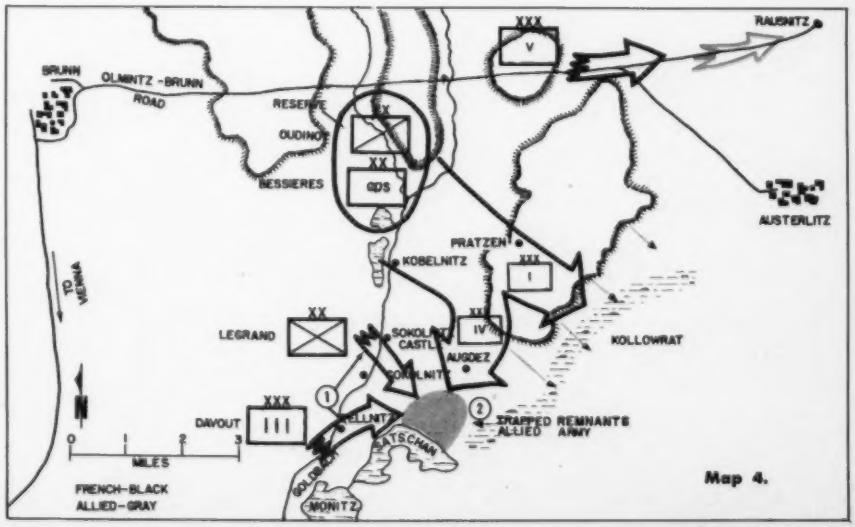
4), and trapped approximately 30,000 intermingled troops against Satschan Pond.

This was the realization of Napoleon's vision of a massed artillery target—and the slaughter began. The Allied Army as an organized instrument of war had been destroyed by the most decisively brilliant application of mass up to that period. Moreover, a kinetic quality of mass was added to the battle in the form of Napoleon's unused reserve (Oudinot's division of the V Corps and the Guards under Bessieres) which remained to the rear.

Never did the sun shine so brightly for Napoleon, the tactician, as it did at Austerlitz. Here was the ideal battle of decision by massed tactical formations rushing like a loosed torrent and carrying all before them to seize the areas of decision. Here also the torrent gained momentum by the application of overwhelming firepower against the massed target presented by the trapped and disorganized enemy.

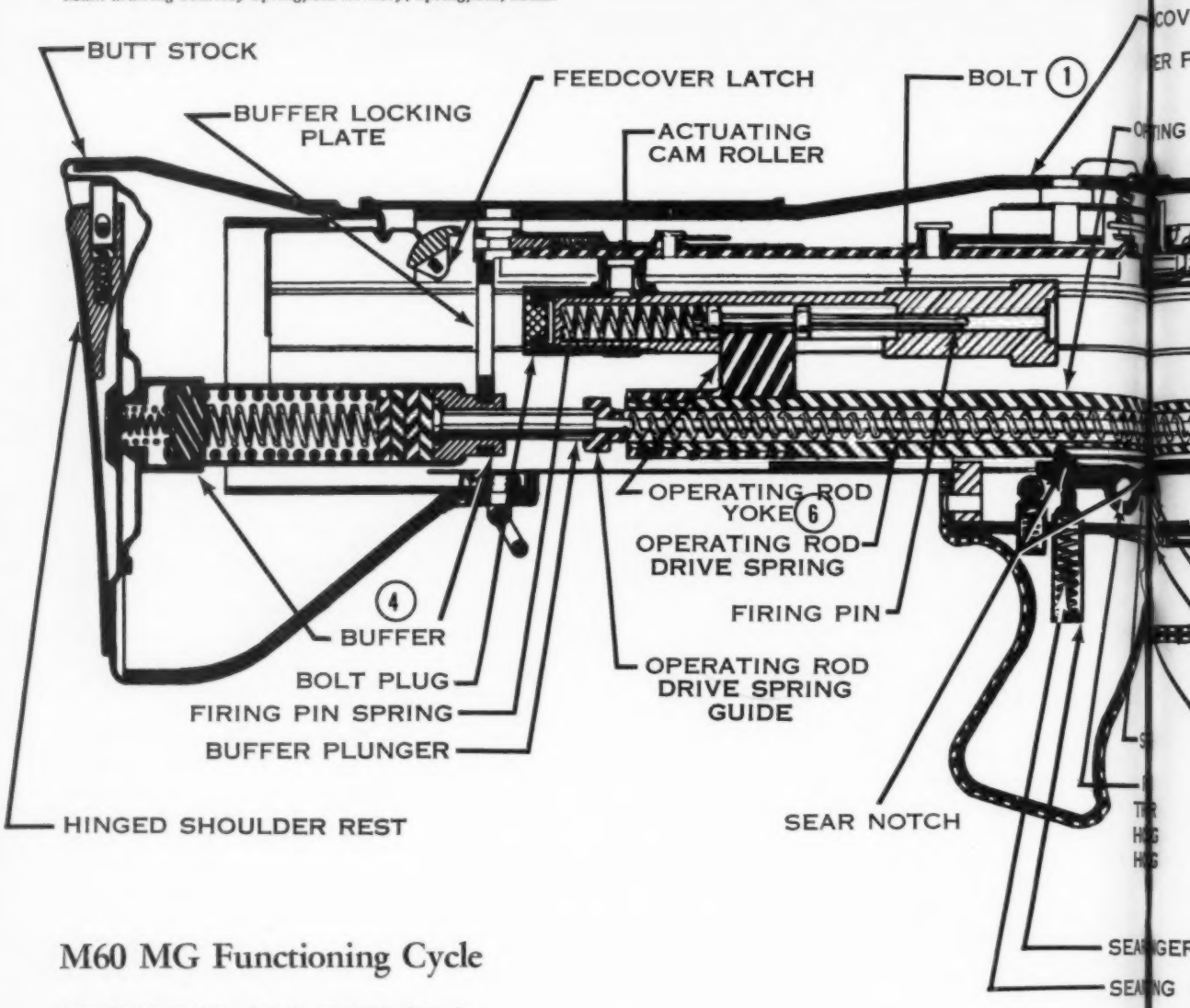
Austerlitz served as a model for the Germans in the successful Battle of Flanders in 1940 and in the abortive Ardennes campaign in 1944. Likewise, it casts its shadow into the future by showing the need for imparting momentum to mass by firepower and usable reserves.

All in all, there are many lessons that can be learned from Austerlitz. But perhaps the most important lesson is found in Napoleon's audacious and imaginative use of mass, coupled with deception. Indeed, his classic assault at the point of decision should serve as a reminder to today's combat commanders that mass is still a primary principle on *any* battlefield, nuclear or not. And when this principle is mixed with the right ingredient of daring personality, dramatic victories can be achieved.



Map 4.

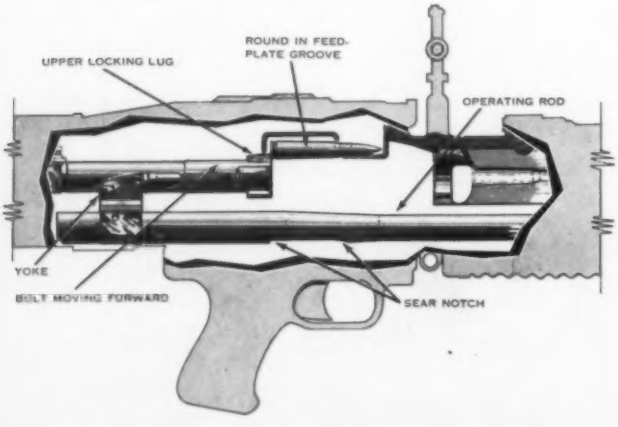
*Main drawing courtesy Springfield Armory, Springfield, Mass.*



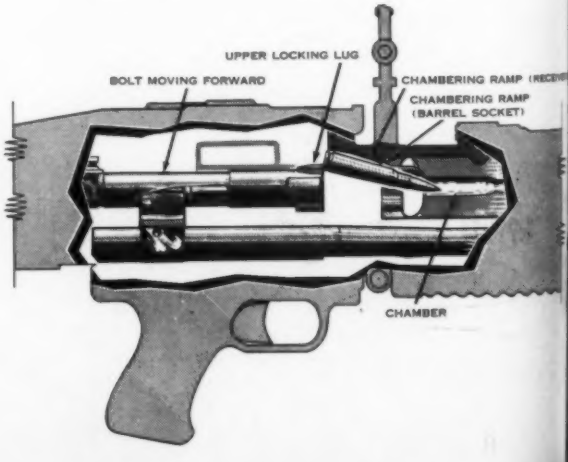

# M60 MG Functioning Cycle

Note: Functioning text refers to components shown in major cutaway (above) and detailed drawings (below).

**1** When the trigger is pulled, the sear is withdrawn from the sear notch in the operating rod, which is driven forward by the operating rod drive spring. The bolt, carried forward by the operating rod yoke, contacts the base of the cartridge exposed in the feed plate groove.




**2** As the bolt continues forward, the upper locking lug strips the round from the belt. The projectile portion of the cartridge comes in contact with the chambering ramp and is deflected into the chamber.



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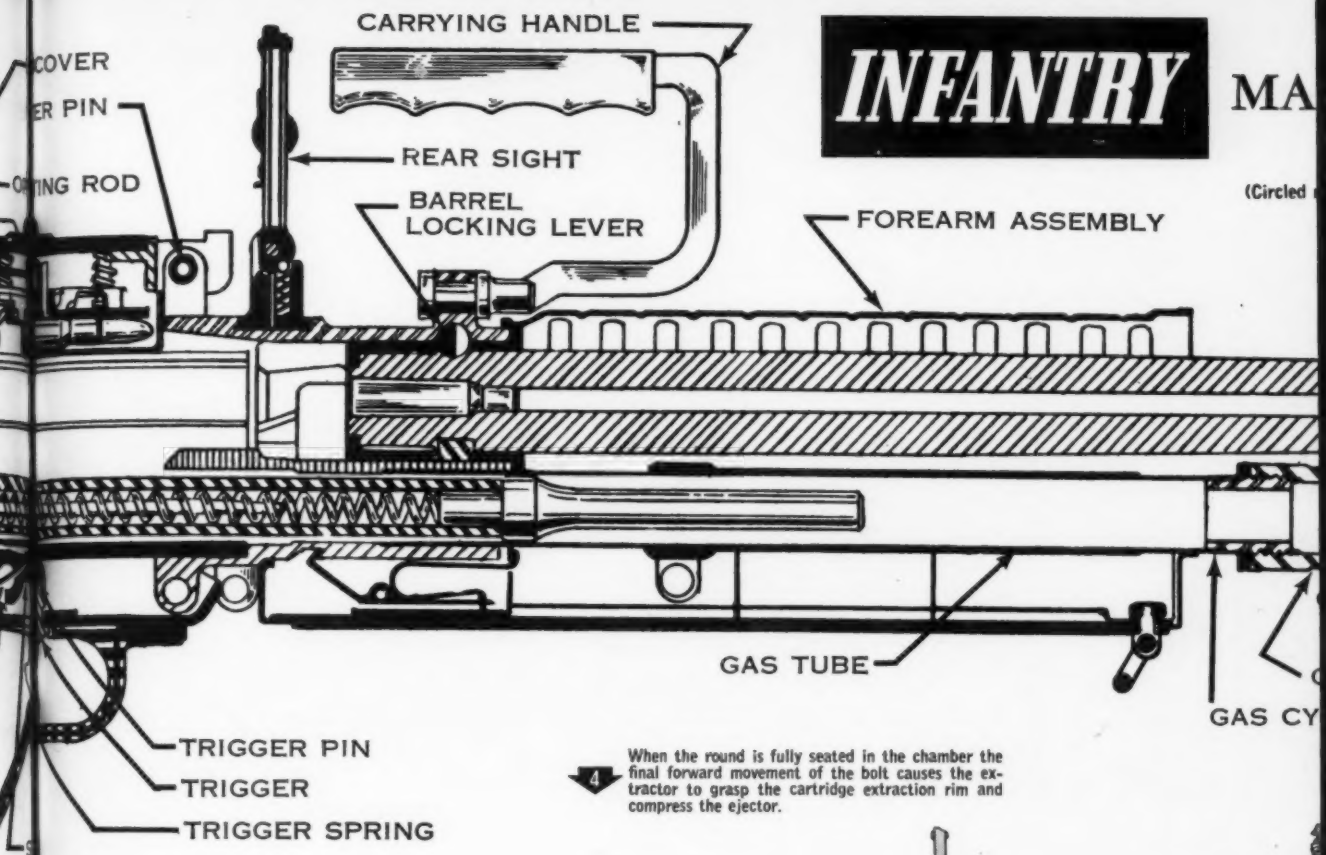
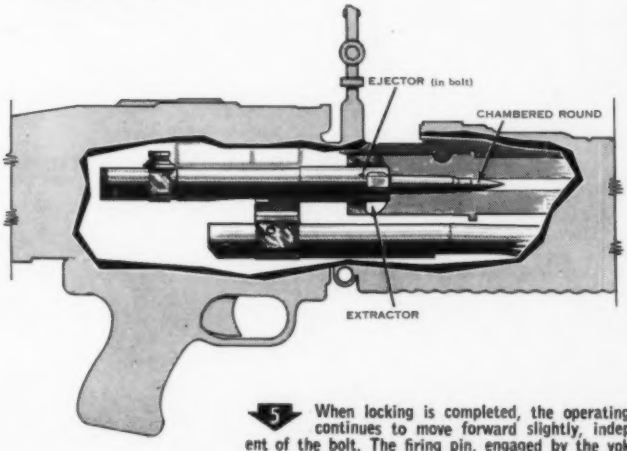
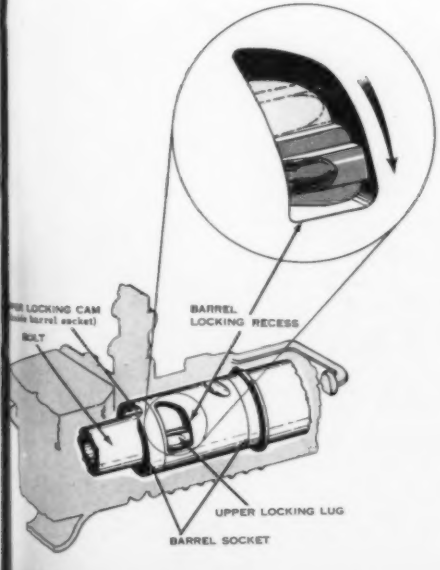


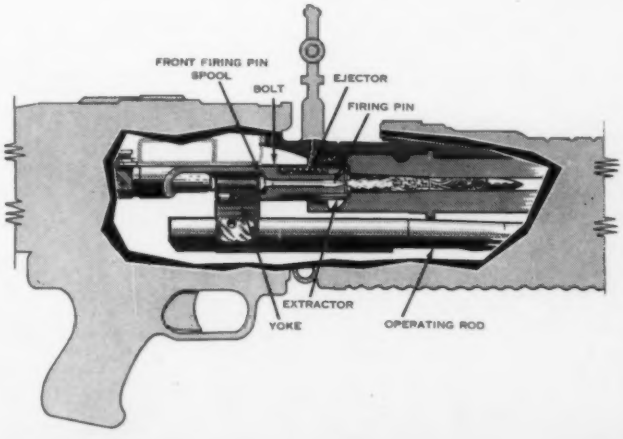

4 When the round is fully seated in the chamber the final forward movement of the bolt causes the extractor to grasp the cartridge extraction rim and compress the ejector.




3 As the round is chambered, the bolt locking lugs engage the bolt locking cams in the barrel socket, causing the bolt to rotate in the barrel socket one quarter-turn clockwise and lock into the barrel locking recess.

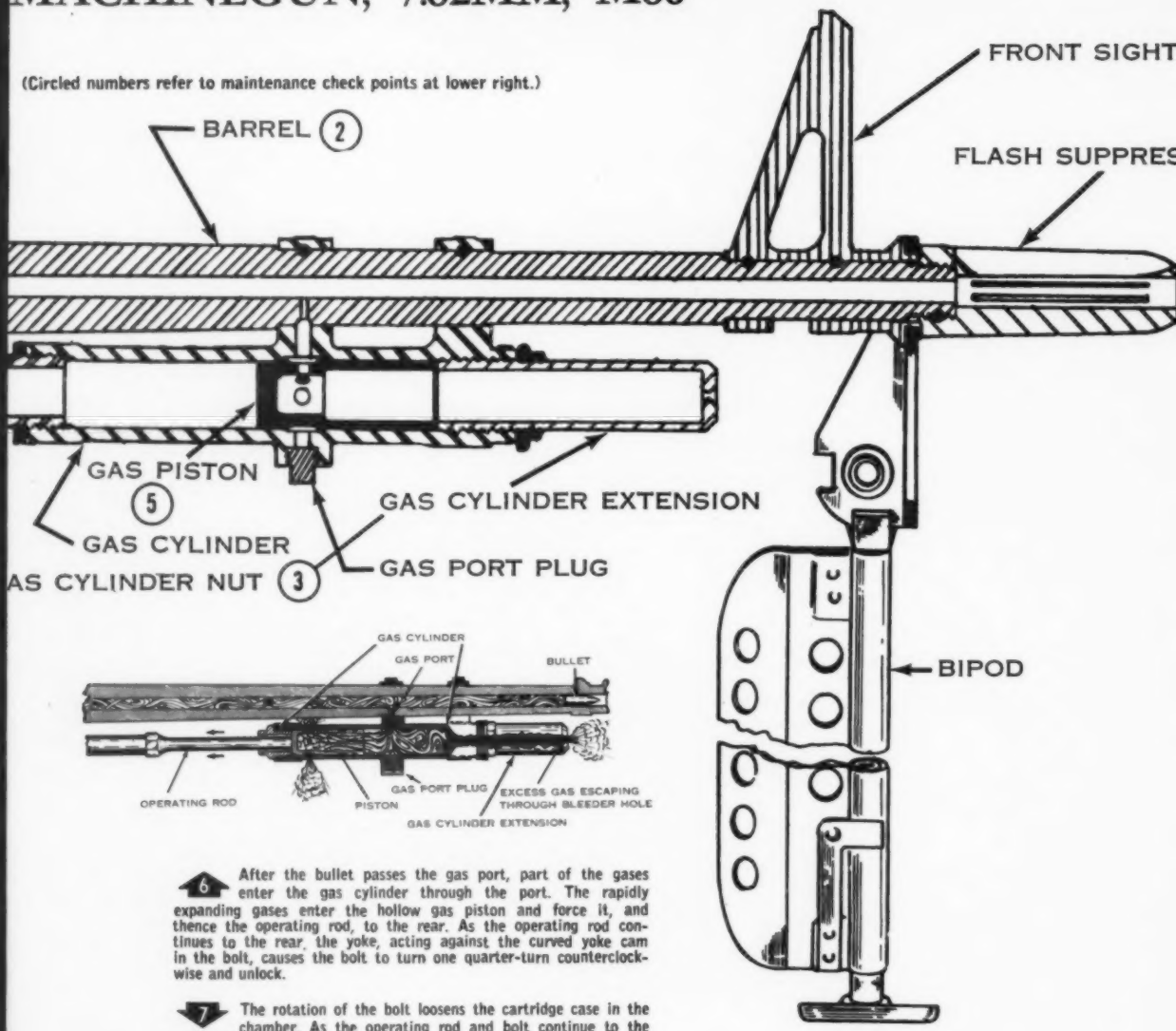



5 When locking is completed, the operating rod continues to move forward slightly, independent of the bolt. The firing pin, engaged by the yoke, is carried forward, striking the primer and igniting it.



# MACHINEGUN, 7.62MM, M60

(Circled numbers refer to maintenance check points at lower right.)







6 After the bullet passes the gas port, part of the gases enter the gas cylinder through the port. The rapidly expanding gases enter the hollow gas piston and force it, and thence the operating rod, to the rear. As the operating rod continues to the rear, the yoke, acting against the curved yoke cam in the bolt, causes the bolt to turn one quarter-turn counterclockwise and unlock.

7 The rotation of the bolt loosens the cartridge case in the chamber. As the operating rod and bolt continue to the rear, the ejector presses on the base of the cartridge case, forcing the neck of the case against the right side of the receiver and causing the case to be spun from the gun as it reaches the ejection port. The empty link is forced out of the gun as the movement of the bolt causes the next round to be positioned for the next cycle.

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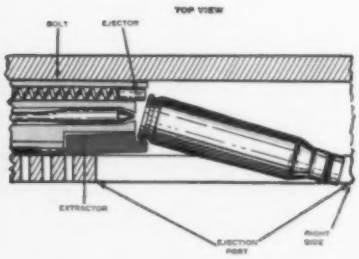


## NORMAL MAINTENANCE

1 Bolt must be to the rear before cover is closed.

2 Barrel must be in weapon before bolt is allowed to go forward to prevent damaging feed plate.

3 Tighten gas cylinder nut and extension and gas port plug securely to prevent loss of gas.

4 Interior of buffer assembly must be free of oil. Do not submerge buffer assembly in oil or cleaning solvent.

5 Keep gas piston and interior of gas cylinder free of oil.

6 Wear on the front of the operating rod yoke is normal and does not affect functioning.

7 Do not allow oil or solvent to come in contact with any rubber covered gun parts.

## BEFORE FIRING

Ensure that all shipping rust-preve tive compounds are removed prio firing.

Coat all parts (except those note 4 , 5 , and 7 above) lightly with

## DURING FIRING

Change barrels after firing 100 ro per minute for ten minutes or 200 ro per minute for two minutes in orde retain maximum barrel life.

## AFTER FIRING

Excessive disassembly of gas cyli system will result in damage to the sembly. Interior of gas cylinder sy should be cleaned only when gun ope sluggishly. A light coating of carbo normal and will not affect functio

SIGHT

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# A DIFFERENT KIND OF WAR

## In The Pacific 1941—1945

In 1944, a correspondent described a battle in the Pacific as "a different kind of war." A half dozen years later, in another desolate part of the Pacific — in Korea — the fighting was described in much the same way — different, bitter, costly.

Somehow, war in the Far East has always been out of the ordinary. And as we learned in this wide expanse of jungle, coral and mountains — from Guadalcanal to Korea—the rulebook often had to be rewritten to fit these "different" circumstances.

While volumes have been written about World War II and Korea, few of these books have captured the valor and pathos of the Infantryman's special kind of war. For this reason, *Infantry* now looks back to these forgotten battlefields.

The purpose is not to eulogize the Infantryman who fought here — for he needs no eulogy. Rather, it is to re-create in these few pictures the environment — the feeling — of combat in the Pacific. If, in retrospect, we can find some lessons for the future by this look at the past, so much the better. And if, in passing, we can also remind today's Infantryman of the gallantry of his predecessors, then our purpose will have been achieved.

1 Few will forget the early days of the war when outnumbered but gallant American soldiers fought a brilliant rear guard action throughout the Pacific—to hold ground and to buy time. It was here that we paid the price for unpreparedness—and the Infantryman from Burma to Bataan paid the highest price of all. The galling bitterness of early defeat was epitomized by General Stilwell's statement after he led the march out of Burma: "We got run out of Burma and it is humiliating as hell. I think we ought to find out what caused it, go back and retake it."

And this . . . we did.

2 But it was not easy to turn the tide of defeat. Obsolescent equipment, unfamiliar jungle and a wily enemy combined to make this different kind of war a great burden for the Infantryman. Unfortunately, we were not trained for this type of fighting, and the learning process was long and difficult. The early days of the war proved once again that an army is not trained or equipped in a day—a week—or a month. And in these battles in the Pacific our period of grace—our lead time—was bought with blood and sacrifice.

3 It was a "different" war in another way—for Americans saw at first hand the suffering of a vanquished people. And they also saw the true meaning of freedom from oppression as they liberated island after island and city after city. Even Manila, jewel of the Philippines, had lost its glow after four years of war. As we learned in these shell-torn battle areas, the cost of freedom comes high . . . but the cost of slavery is incalculable.

By Maj William A. Brown

4 On once insignificant islands, war became a very personal matter, and survival—and victory—hinged on the heroic actions of the combat squads and platoons who closed on enemy bunkers with flame and rifle to make the victory absolute. On these islands, combat was an inch-by-inch affair where the din of battle erased talk of easy victory and push-button wars.

5 And as each island was taken, it led eventually to another battle—more bunkers—more jungle—and more enemy. In over a dozen major amphibious landings, Army Infantrymen stormed ashore. And it took a team of Americans—soldiers, sailors, airmen—to put the doughboy on the enemy beach and keep him there. But in the end it was Infantry determination, courage, and perseverance that marked the farthest line of our advance—and of ultimate triumph in the Pacific.

To our bitter disappointment, however, the ultimate triumph was not ultimate.

## . . . and in Korea 1950—1953

6 . . . Once again it became the same old story. The half-forgotten lessons of the Pacific War stood out clear and harsh in the gloom of early defeat. And once again we found that the hardest road was one to the rear—away from hills and valleys stained with blood and sacrifice.

7 As the tide turned—as it always must—these same valleys and hills were regained by valiant Infantry spearheading a combined arms team with skill and determination and selflessness. On the frozen rice paddies of Korea, teamwork became more than a textbook phrase—it became a practical matter of fighting together to win on the battlefield.

8 War correspondents were quick to proclaim these smashing victories—these tactical successes and strategic triumphs. But in the stillness of the frontline aid station, the glittering phrases and the poetic prose of the press were somehow lost . . . for no words could describe the quiet kind of valor that one found here. It was here that one realized that this was indeed an Infantryman's war—as the statistics on Purple Hearts will bear out—and it was also here that the phrase "the pain and the glory of war" gained full meaning.

9 And if anyone had a misconception that this was an "easy war" or a "small war," it was dispelled by the cold and the terrain—and the enemy. There were no quick and easy victories—and our timetable of success was again measured by the pace of the Infantryman's boot and by the breadth of his individual courage. As in earlier wars, we found that there was no magic formula yet devised for taking a hill.

10 In the final analysis, then, the war in Korea was not unlike combat in the Pacific during World War II. It was a personal kind of war—a different kind of war—and, in a very real sense, a forgotten war. But when the uneasy truce was signed, the record of the Infantryman's valor was etched on a string of hills from the Pusan Perimeter to Heartbreak Ridge.

Just as this soldier looked over T-Bone Hill after the armistice, so, too, could all Infantrymen look back on their hill . . . and their battle.

The record was in the books . . . and it was a proud one. . . .

# CLOSE AIR SUPPO

". . . We've hit a strong point . . . being held up . . . enemy strength about a platoon of tanks in hull defilade . . . also a rifle company well dug in . . . artillery has been ineffective . . . request air strike . . . coordinates 926431 . . . ."

This was the transmission from Captain Miller, commanding Charlie Company—the company leading the attack. And as the battle group commander, Colonel Stoup, listened and pondered this unfortunate turn of events, he knew that the successful accomplishment of his mission was in jeopardy.

The battle group was now well forward of friendly lines, and the Colonel had been counting on shock action and momentum to carry it through the enemy defenses. Now, that hope was fleeting . . . something had to be done —and quickly!

Colonel Stoup took a hurried look at his map and mentally weighed the possibilities. Then he turned to his S3: "Can you get an immediate air strike on that position?"

"I'll find out, sir . . . I'm calling the S3 Air now."

". . . We need an immediate air strike on enemy position vicinity coordinates 926431. Estimated strength: platoon of tanks in hull defilade and rifle company, well dug in."

". . . Roger—wait."

In the command group, they stood silently and listened to their radio as the S3 Air contacted the Forward Air Controller (FAC)—the Air Force offi-

by Capt James G. Donahue

*Here are the techniques for calling in tactical air support*

cer with the battle group—and relayed the request.

In a matter of seconds, the FAC radioed the flight leader of the four combat-loaded fighter-bombers overhead which were executing a preplanned "column cover" mission in support of the battle group. "Flight Leader Silver Streak, this is Forward Air Controller. Over."

"This is Flight Leader Silver Streak. Over."

"This is Forward Air Controller. Estimated tank platoon in hull defilade reinforced with rifle company well dug in vicinity coordinates 926431. Request immediate strike. I will direct you from my position. Over."

"This is Flight Leader Silver Streak. On the way. Over."

At this, members of the command group turned to watch the aircraft approach from the rear.

"This is Forward Air Controller. You should be able to see your target in a couple of seconds at a point just to the northwest of where the railroad crosses the blacktop highway. Over."

Then a short pause.

"This is Flight Leader Silver Streak . . . over target . . . target located . . . we're coming down . . . . "

The flight of four aircraft angled toward the target, and four loads of bombs, rockets, napalm and machine-gun fire brought death and destruction to the enemy personnel and tanks. In less time than it takes to tell about it, it was over. The flight leader flew back over the target to give the FAC

**The F-100 "Super-Sabre"** is currently the workhorse of the Tactical Air Force. It is capable of speeds above 800 mph and carries the same ordnance as the newer F-105. The F-100 is armed with four M39 20mm cannons.

a spot report on the effect of the air attack.

"This is Flight Leader Silver Streak. Three enemy tanks destroyed or disabled . . . estimate 80 killed . . . heading back to base. Flight Leader Blue Streak will replace us on station. See you later. Out."

Then the report to the battle group: ". . . Gallant Six (CO 1/87), this is Gallant Nine (S3 Air), spot report. Three enemy tanks destroyed. Estimate 80 killed. Over."

"This is Gallant Six. Good work. Out."

The mission was accomplished and these enemy tank and Infantry units, posing a serious threat to the attack, were quickly destroyed by Tactical Air Support, a versatile, potent means of combat power immediately available to the battle group. The time required for the air attack on the enemy position—from the initial report by the company commander until the strong point was knocked out —possibly 10 minutes. Unrealistic? Not at all!

Tactical Air Support can and will do the job if proper planning is done at battle group level, and if the Infantry commanders use the weapons system to its full potential. The fact that the aircraft were overhead executing a "column cover" mission in this situation was not just luck or happenstance. These planes were on a preplanned mission, ready to assist the battle group in its advance. These commanders — company and battle group—knew what the Tactical Air Force could do for them—and it was done.

As this example has shown, the techniques used to bring air weapons on the target are relatively simple. What is surprising is that many Infantrymen do not understand how easy these techniques are and how effective the air support can be. To fill this gap, perhaps a brief word of explanation is in order.

To begin with, the close air support missions available to the battle group may be classed in two types: preplanned and immediate. Preplanned missions are those for which the target has been selected sufficiently in advance to allow complete planning. They are normally more effective because time is available to obtain target information for study and weapon selection. *Twenty-four hours is usually the time required to process a preplanned mission.*

The "column cover" called upon by our battle group commander was a preplanned mission, although the targets developed were immediate in nature. Column cover has many obvious advantages in that it provides visual reconnaissance and protection from enemy air attack as well as close air support.

Immediate missions are those which arise during the course of battle and which cannot be foreseen or planned in advance. *The time required to execute an immediate air request using ground alert aircraft (maintained at an air base ready to respond to immediate requests) is approximately 30 minutes and depends largely upon the distance from the airfield to the target.*

These, then, are the missions which the Tactical Air Force can perform for the Infantry commander. But like most modern weapons of war, close air support is too complex a process for direct commander-weapon application. Between the Infantry commander and the flight leader are the "experts" in their field of air-ground operations.

Closest to home is the S3 Air, the primary assistant to the battle group commander in matters concerning air-ground operations. He is an assistant to the S3 and is provided with a vehicle and driver. To enable him to perform his role in the air-ground team, the following communications equipment is also provided:

- An AN/GRC19 which operates as a subordinate station in the Division Air Request Net.
- An AN/GRR5 which operates in the Division Warning Broadcast Net.
- An AN/ARC27 which monitors transmissions between aircraft and the Forward Air Controller, nets with reconnaissance aircraft if desired and receives spot reports on the effect of air strikes. In an emergency, the S3 Air may perform the duties of the Forward Air Controller with this radio.

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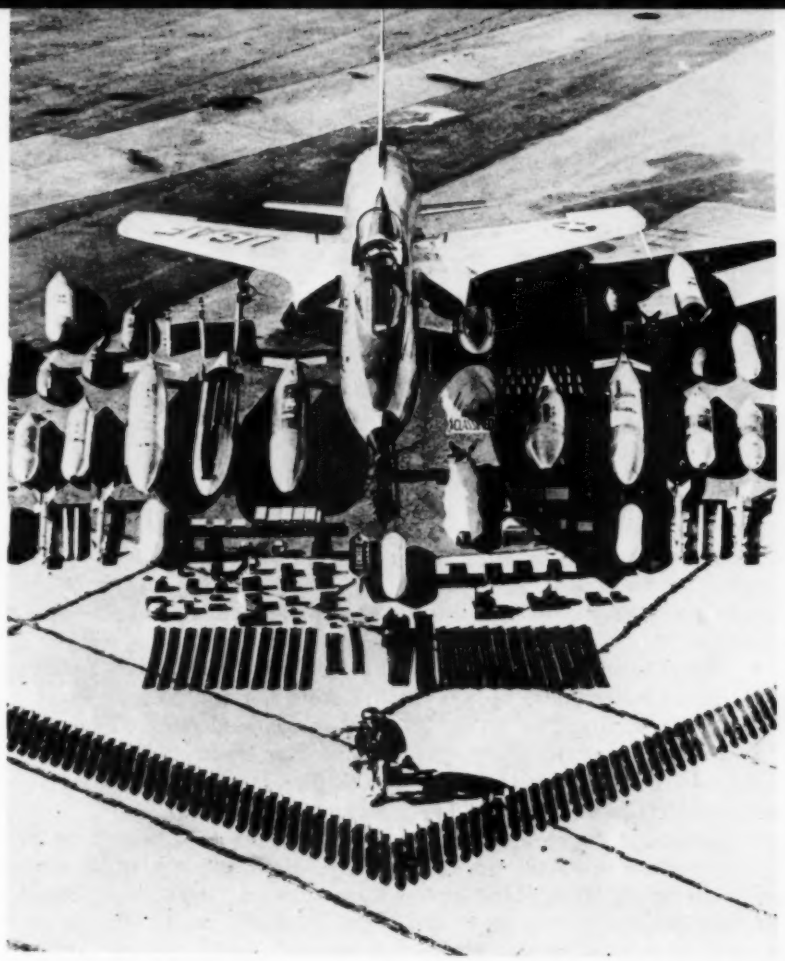
CAPT JAMES G. DONAHUE is a 1953 graduate of the United States Military Academy. He attended the Basic Infantry Officers Course and the Ranger Course in 1953, the Airborne Course in 1954, the Associate Infantry Company Officers Course in 1955, the Air-Ground School in 1959 and the Advanced Course in 1960. Captain Donahue was a company commander and a tactics instructor with the 3d Armored Division at Fort Knox, and, in Germany, served as assistant battalion S3 and as a company commander in the 36th Armored Infantry Battalion. He is presently assistant secretary, USAIS.

In addition to initiating and processing requests for air strikes, the S3 Air has many other responsibilities: coordination with the BG Fire Support Coordinator to ensure proper use of fire support; supervision of joint recognition and identification procedures; and coordination of air defense according to the policy established by higher headquarters.

Additionally, the S3 Air is responsible for the preparation of the tactical air fire plan portion of the fire support plan. Moreover, he prepares the close air support portion of the battle group SOP and advises the commander on the capabilities and limitations of aircraft and aircraft ordnance.

The S3 Air must also coordinate with and provide assistance to the Air Control Team, which is the second half of the air-ground operations team at battle group level. The Air Control Team consists of the Forward Air Controller—a rated pilot, usually combat-experienced, temporarily assigned to ground duty to direct air strikes—and a driver-radio operator (with vehicle and communications equipment) provided by the Army. Normally, one Air Control Team is assigned to each battle group. The team is equipped with an AN/VRC30 radio (contained in the TOE of the Artillery battalion normally in direct support) which can net with aircraft to direct air strikes or receive spot reports.

The Air Control Team is responsible for directing *visual* air strikes—in daylight, and under good weather and visibility conditions. During bad weather or darkness, when the Air Control Team cannot operate, it may be necessary to use *electronic control* methods. In such a case, the target is identified by map coordinates, and Target Detector Posts use radar to direct the strike. Although it is effective, *electronic control* has three principal disadvantages: It is susceptible to enemy electronic countermeasures; it has a relative lack of flexibility in shifting from one target to another; and it needs extreme accuracy in target location.



**The F-105 "Thunderchief,"** the newest close-support aircraft of the TAF, is slated to replace the F-100. It can deliver a variety of armament as shown above, including napalm, conventional bombs, "Sidewinder" missiles (air to air), aerial rockets (air to ground or air to air), and tactical nuclear weapons. The F-105 is armed with a 20mm Vulcan cannon. This aircraft will be the mainstay of the Tactical Air Force in the future.

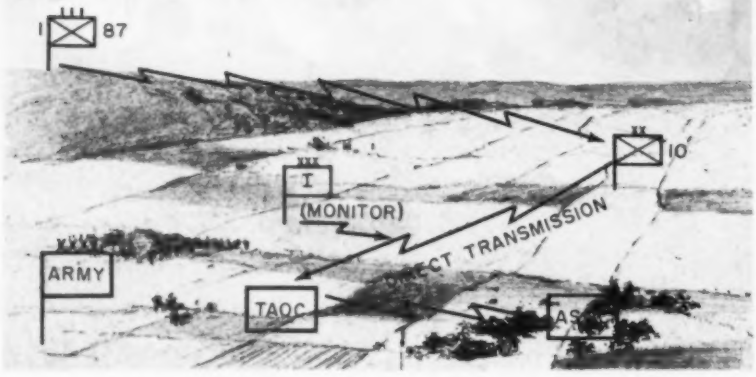
Although close air support is a joint Army-Air Force operation and is applied through special Army and Air Force staffs, it remains essentially a "personal" weapon for the Infantryman—the man who comes face to face with these enemy obstacles which become air targets. In most instances it is this same Infantryman who must initiate the sequence of events which will result in the application of this effective air weapon.

The most important point in the Infantry commander's role in air-ground operations is in target selection. Since there are generally insufficient aircraft available to attack all targets, target selection becomes a critical factor in the employment of close air support.

Normally, this support is used only against targets which are beyond the destructive capability of organic weapons which support the battle group, *unless* the added firepower delivered by aircraft will produce decisive results. Some other criteria for the selection of air targets are these: must be identifiable from the air; must be vulnerable to the capabilities of aircraft ordnance; and the time required for the air attack must not exceed the time in which the target may disappear or which may cause excessive delay in the operation.

Once a target has been selected,

Figure. 1. Procedure for making an immediate air request.




the request for air support must start on its way through channels. Every request—preplanned or immediate—no matter whether it originates in the company or the battle group—must contain the following *minimum* information:

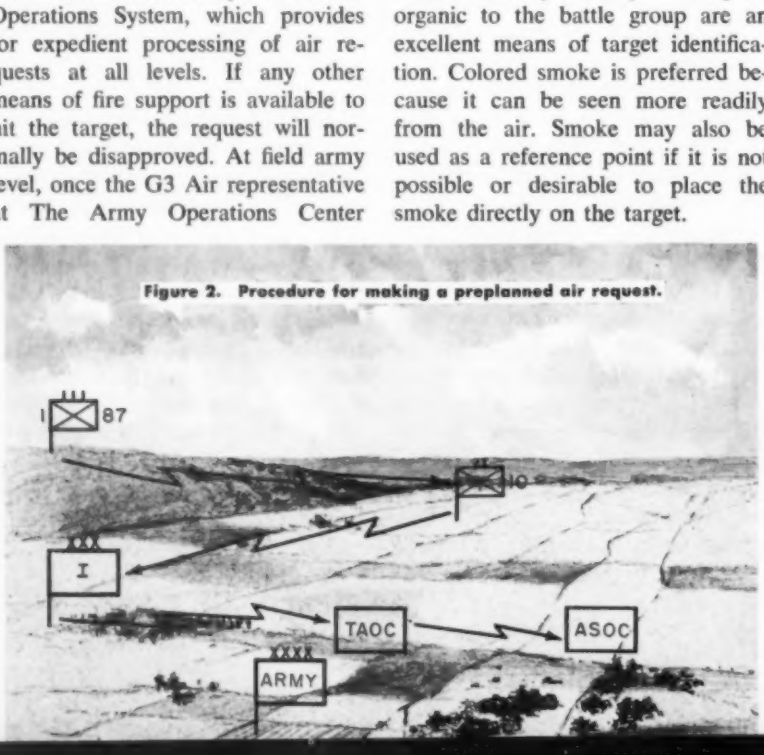
- Target location.
- Target description.
- Time over target.
- Means of control.

The S3 Air then prepares the request, coordinates with the Fire Support Coordinator, secures approval of the commander, briefs the Forward Air Controller on details of the strike and then forwards the request to the division G3 Air. (Channels for an *immediate* request are shown in Figure 1; for a *preplanned* request in Figure 2.)

The request then travels through the channels of the Army Air-Ground Operations System, which provides for expedient processing of air requests at all levels. If any other means of fire support is available to hit the target, the request will normally be disapproved. At field army level, once the G3 Air representative at The Army Operations Center (TAOC) gives the approved request to the Air Support Operations Center (ASOC) as a requirement, the Air Force provides the means to conduct the air strike. (Approval or disapproval of a request for an air strike rests primarily with Army agencies in the Air-Ground Operations System.) The requesting unit is then notified of the approval and other coordinating details. This information is passed on to all persons concerned in the battle group by the S3 Air.

Prior to the execution of an air attack, consideration must be given to making the target readily identifiable from the air. Landmarks and prominent terrain features are, of course, excellent reference points, and the target may be pointed out to the flight leader in relation to these points as well as by coordinates. Smoke rounds fired by artillery or weapons organic to the battle group are an excellent means of target identification. Colored smoke is preferred because it can be seen more readily from the air. Smoke may also be used as a reference point if it is not possible or desirable to place the smoke directly on the target.

Figure 2. Procedure for making a preplanned air request.




Simulated attack runs on the target by the flight leader and subsequent verbal adjustment directions by the Forward Air Controller is another means of target identification. However, this method alerts the enemy to an air attack, and aircraft may possibly be lost or damaged in the simulated attack.

At night, illumination (aircraft flares, artillery shells, mortar shells or searchlights) may be used to identify targets. Two searchlight beams may be crossed at the target to be attacked, or illuminating artillery or mortar shells may be used to mark the approach to the target.

The lifting of artillery fires immediately prior to the attack is no longer necessary, unless the VT fuze (other than the terrestial type) is being used. Information concerning flak suppression fires in the vicinity of the requested air strike is normally added to the request by higher headquarters.

As we view the Air-Ground Operations System as a whole, it becomes evident that effective planning, requesting and processing are all essential parts of the framework on which air support must be built. It doesn't just "happen."

And in adding up the capabilities of the Air-Ground Operations System, it is also clear that better communications equipment, improved high-performance aircraft, versatile ordnance and firepower and improved techniques of operation and control have made the Tactical Air Force one of the most potent weapons in support of the Infantry. However, the mere presence of aircraft and a good air-ground system will do nothing by themselves. Knowing *how* and *when* to use them—and this is the Infantry commander's job—is the key to the effectiveness of the entire Air-Ground Operations System. A good use—or misuse—of this weapon by the men on the front line may eventually be reckoned in terms of lives, and possibly battles.

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*This article is in consonance with current doctrine as taught at the United States Army Infantry School.*—Editor

*"If wishes were horses, beggars might ride."*
John Ray's *English Proverbs*

# BEGGARS AND RIDERS — AND M59s

by Capt Allen M. Buckner

WHEN the armored personnel carriers arrive in your area tomorrow for that mechanized attack, will you be ready for them? And do you plan to let the show run itself—or do *you* plan to run *it*?

These are important questions that deserve an answer. For whether your unit rides to the objective or unloads from an inoperable carrier and walks —wishing for horses, perhaps—is up to you, their company commander.

Your responsibility does not end with the arrival of the APCs and their subsequent assignment to your platoons. In fact, this is just the beginning. You are also responsible for ensuring that your subordinates carry out an effective system of pre-operation checks of carriers, their equipment and their drivers.

How well these checks are administered and the effectiveness of these pre-operation techniques will come to light when your men ride—or walk—to the objective. If you are interested in learning these techniques, let's go back to your company for a moment and see how it's done:

The Op order tells you that your battle group will attack at 0930 hours tomorrow with your company leading the attack. Another sub-paragraph tells you that you will have the following attachments: one tank platoon, one carrier squad plus four carriers, and one short-range radar team.

So what's new? It's only 1330 hours now, and you've done this before—and with a lot less time for planning. Your only concern is that you recall the last time you had M59s attached: The attack was fouled up. Of course, it wasn't your fault; the plan was good—it was those unpredictable M59s. The first platoon leader's track broke down—overheated engine, you think. The third platoon leader lost communications with his weapons squad and had no machinegun support during his assault. Of course, no one got hurt—it was only a company test. But those were 10 good points you should never have lost.

Now you wish for the good old days. You can always count on the doughboys' feet, but you're not so sure about the M59s. Sometimes they go—sometimes you just don't know.

But this is another day and another attack—so let's see what we can do. Before you start your serious planning for this attack, why not call the battle group communications officer and ask for a radio repairman to be prepared to come to your company tonight if you need him. Have your executive officer or first sergeant make liaison with the carrier squad leader and plan to meet the carriers outside the company assembly area as soon as possible after the

attachments are effective. Then call your platoon leaders, communications sergeant and others to your command post for a warning order—but this time include your armorer.

Do your usual planning, but in giving your preliminary plan or warning order also do this: Tell your leaders that the M59s will not be turned over to them until you have checked with the carrier squad leader. He knows his vehicles, and if one has been giving him trouble, you can then alert the platoon leader using it so that he can prepare for a possible breakdown. The platoon leader will thus plan to keep the attack from slowing down by giving this vehicle to his second squad in the attack and alerting the third and fourth squads to pick up the troops if a breakdown should occur. In this way, the platoon can reach the objective at full strength.

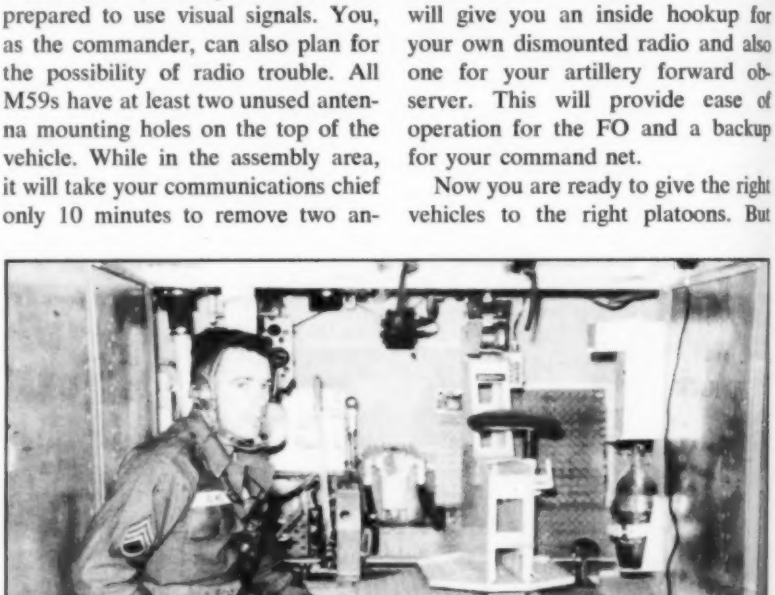
You know that all of the M59s will have at least one AN/VRC-7 radio and as many as four may have an AN/GRC-8. These radios must work if the platoon leader is to have control of the vehicles' fire support when the troops dismount. Therefore, your platoon leaders, assisted by the communications sergeant, must check all radios and call for a repairman, if necessary. A typical discrepancy is that audio components are missing. If a radio has less than two sets of earphones and mikes, temporary adjustments within the carrier squad must be made. If a radio cannot be repaired prior to the attack, the vehicle must be equipped with an AN/PRC-6 radio. And if two vehicles are in this shape, make sure that one platoon leader does not get both.

As we mentioned, as many as four M59s may have AN/GRC-8 radios. The company commander must have one of these. The other AN/GRC-8s should go to the platoon leaders to best suit the tactical plan.

Another point to remember: The radios may develop difficulties during the conduct of the attack. To take care of this, you must remind your platoon leaders to have their dismounted radios handy and also to be prepared to use visual signals. You, as the commander, can also plan for the possibility of radio trouble. All M59s have at least two unused antenna mounting holes on the top of the vehicle. While in the assembly area, it will take your communications chief only 10 minutes to remove two antennas from your ¼-ton truck and remount them on the M59. This trick will give you an inside hookup for your own dismounted radio and also one for your artillery forward observer. This will provide ease of operation for the FO and a backup for your command net.

**Antennas from a ¼-ton truck remounted on the APC . . .**

Now you are ready to give the right vehicles to the right platoons. But



**. . . can provide an inside hookup for the commander's or forward observer's radio.**

before your leaders move out, remind them of their extra armament. Remember, a reconnaissance by fire is helpful in checking a danger area while moving. The .50 caliber machinegun gives you this capability. Also, you may need this weapon to add security to the assembly area tonight and to your flanks tomorrow. In this regard, your armorer can assist the platoons by ensuring that all .50 caliber machineguns are in working condition. As a minimum, a final check on headspace and timing of these weapons should be made.

At this point you have obviously planned for the contingencies and feel much better. Yet, things can still go wrong. A mechanical device can fail at almost any time. And what if the maintenance is not up to the standards you desire in the tracked vehicles? After all, the division has been in the field for six days, and the carriers have bounced from one battle group to another, leaving little time for the mechanics to work. Of course, they may be in good shape. There is nothing you can do but hope that this is the case. After all, maintenance of these carriers is the responsibility of the transportation battalion.

But wait a minute—certain responsibilities for maintenance *do* belong to the organic transportation unit, but taking the objective tomorrow is *your* job. Ensuring that your troops have the benefit of properly maintained equipment is also your job. An inoperable carrier could be disastrous. And a ramp failure when a squad begins to dismount could allow an enemy antitank weapon a second shot at 11 of your men in one vehicle. So maintenance *is* a problem for you to be concerned with.

What can be done to preclude a ramp failure and other mechanical malfunctions during the conduct of an attack? Here are some possible solutions: Get a copy of DA Pamphlet 750-1, *Preventive Maintenance Guide for Commanders,* and read the foreword by General Maxwell D. Taylor. Then read paragraph 7. Read both aloud to your assembled leaders. This should raise a few eyebrows. Now turn to page 276 and show your platoon leaders the 28 check points with illustrations which can be used to ensure that their M59s are combat ready. Point out that no daylight is needed for these pre-combat checks since they can be readily made during darkness with the aid of a flashlight. Now let your platoon leaders know that you believe in these pre-combat checks and that you expect a complete rundown of each vehicle before the start of an operation. This should do the trick.

**Before any operation, machinegun headspace and timing should be checked by the company armorer.**

Of course, there may be an occasion when time does not permit this close inspection by your leaders. When this occurs, you should require, as an absolute minimum, that all lube levels, water, fuel, and the ramp operation are checked on the vehicle. Also require that the .50 caliber machinegun be checked for headspace and timing, and insist upon close coordination between the commander and the driver to ensure that any abnormal vehicular limitations are understood.

One further point: These few words on maintenance should not be confused with maintenance under unusual conditions. For before-fording, after-fording and operations in extreme weather and terrain, refer to TM 9-2300-203-12. This manual has all of the answers.

Well, that's it. I think you will find these suggestions surprisingly easy to put into practice and a big help in holding on to your additional mechanized speed, your bonus in firepower, and your reliable communications to control the whole show.

As I said before—beggars or riders—it's up to you.

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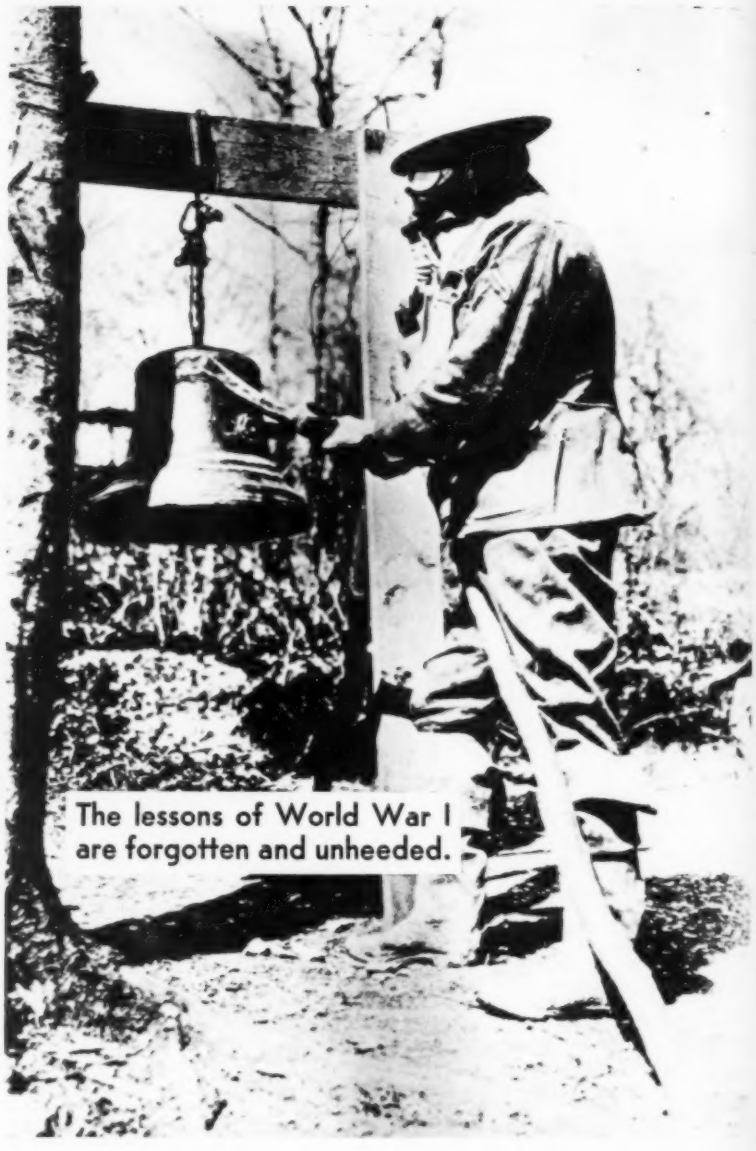
CAPT ALLEN M. BUCKNER received an ROTC commission from the University of Kentucky in 1953. That same year he attended the Basic Infantry Officers Course at Fort Benning. Subsequently, he was a company commander and then S2 in the 37th Armored Infantry Battalion. He later served as commanding officer of Headquarters and Headquarters Company, Combat Command C, 3d Armored Division, in Germany. Captain Buckner has completed the Communications Officer School and the Infantry Officers Advanced Course. He is now an instructor with the Command and Control Committee of the Ground Mobility Department, USAIS.

# A QUIET WARNING

Time's passage has stilled history's quiet warning.



The lessons of World War I are forgotten and unheeded.

by Dr Brooks E. Kleber

THE WEARY TROOPERS slouched with fatigue from another night of standing on a muddy fire step. They hunched their shoulders against the rain and thankfully sipped their coffee. Hot, black and strong, the coffee slowly drained away the tension, and these men, members of a World War I American division, were grateful to the K.P. who had made the long trip to the rear for water.

Twenty-four hours later, forty-six men from this unit lay clutching their stomachs in a field hospital. Diagnosis: gas poisoning.

Only after extensive investigation was it revealed that the K.P., rather than make the long trek for water, had filled his cans at a shell hole and in so doing poisoned his comrades with chloropicrin.

Neither these men, nor any other member of the AEF, would have found any help in the guide written by one divisional gas officer. Prepared shortly after his unit lost heavily in a mustard gas shelling, the guide contained such dubious bits of information as: "When chloride of lime is available, rub your hands with it frequently." and "Men are liable to lose genital organs from gas burns."

These examples relating to the use of gas warfare in World War I are quite remarkable. The K.P. was from an experienced frontline unit; even if he were a recent replacement, he should have had at least some basic indoctrination in chemical warfare. The bad advice in the training memo was all the more inconceivable coming, as it did, from an officer who should have had knowledge of the effects of mustard contamination.

Remarkable, yes, and also interesting, but what is the real significance of these AEF experiences in chemical warfare? Their significance is twofold: First, they show that even in a conflict where the employment of chem-

ical warfare is the normal state of affairs, *constant* attention must be paid to the problem of keeping an adequate state of gas training and discipline. And second, not only are there lessons to be learned from the gas warfare experience of World War I, but these lessons have a validity even today. This is perhaps the most important lesson of all.

As we learned in World War I, the mainstay of gas discipline is gas training. There must be thorough training in measures of individual protection against gas warfare to prepare the soldier to meet the test of battle. Having once passed this initial test, the education of the soldier must continue, for training is not a one-time proposition but the constant concern of any organization. Care also must be taken to ensure that unit replacements are thoroughly trained in gas warfare, although this matter is usually out of the hands of the frontline division.

Let's give life to these generalizations with more examples from World War I. Consider the case of an inexperienced division's first contact with gas:

Early in August 1918, the U. S. 89th Infantry Division relieved the 82nd Division in a quiet sector along the southern edge of the St. Mihiel salient. It was an assignment befitting a new organization. The 89th had arrived in France late in June 1918, had completed four more weeks of training, and now was ready for its first taste of combat. These troops had received instruction in the gas mask and training in gas defense drill both in the United States and in France, although it was improbable that many officers (other than the division gas officer) had attended the special gas courses available at the time in France.

There was no reason for the 89th Division to expect that an enemy gas attack would interfere with the problems involved in relieving the 82nd. Yet, on the night of 7 August, as the relief was in progress, the Germans suddenly dumped 8000 artillery gas shells on the sector, most of it mustard with a sprinkling of phosgene. Although elements of both divisions felt the effects of the bombardment, heaviest hit were the 354th and 355th Regiments of the 89th Division.

Casualties, bound to occur from such a heavy concentration of gas, were increased by deficiencies which appeared in training and procedure. According to an 89th Division inspector, a principal reason for the high losses was the inability of officers and men to recognize the presence of gas or to appreciate its dangers.

For example, when the 89th Division Gas Officer visited a regimental command post during the afternoon after the night of the attack (it seems that neither he nor his opposite number with the 82nd had received word of the attack until some eight to twelve hours after it started), he found men sitting in the grass, sprawling in the ditches by the roadside, or taking shelter in contaminated dugouts, all with utter disregard for the gassed areas in which they found themselves.

The ambiguity, even uncertainty, as to the proper tactics to cope with such a gas attack made conditions worse. French doctrine demanded that alternate positions be prepared so that areas drenched with mustard gas could be evacuated. Although AEF thinking vacillated throughout the war, one of its last doctrinal pronouncements directed that troops evacuate a mustard-contaminated area, ". . . if the tactical situation permits."

This was the loophole—the tactical situation seldom permitted. Why was it good sense to get out of an area drenched with mustard? Another bit of official advice answers that question: Eight hours was the maximum time troops could be expected to wear the respirator (in those days an especially uncomfortable apparatus) complete with nose clip and mouth piece.

The two American divisions suffered about 820 casualties, 50 of which were fatal, from the gas bombardment. According to Col. John C. H. Lee, Chief of Staff, 89th Division, "The terrible results were due to ignorance." The verdict of the division surgeon: ". . . we never realized what gas was and not enough attention had been paid to the instructions given on the subject before entering the area."

**In gas drill—and in combat—the reaction of many soldiers was skeptical and apathetic.**

Take now the example of an experienced unit, one well versed in the demands of combat. The 1st Division in World War I was literally the first division. The "First Expeditionary Division," it was the only one in the AEF which had time enough to undergo the entire training program prescribed: one month of orientation and small unit instruction, another in a quiet sector learning trench warfare tactics from French battalions, and a third month of training in the tactics of open warfare.

Gas warfare instruction was not neglected. The troops had training in its offensive and defensive aspects and often wore their masks as they participated in their maneuvers. All division officers and noncommissioned officers sat through a course of six lectures on gas defense. Adequate training publications supplemented this formal instruction. Moreover, the division was to mark up more combat time than any other unit in the AEF. .

On 1 October 1918, the 1st Division, poised for attack, received word from First Army that the advance was postponed. Three days were to go by before the division got the green light. The delay was costly; during the interval enemy bombardment inflicted 1500 casualties, 900 of them from gas. Why did this well trained, combat experienced organization suffer so from German chemical attacks? There were many answers.

Some men, after faithfully taking all precautions in passing through a gassed area, became casualties while digging in ground which some time earlier had been contaminated with mustard. Engineer units working to make roads passable were particularly susceptible to this kind of gassing.

**The advice of our Allies, who were experienced in gas warfare, often went unheeded.**

An Infantry regiment suffered 392 casualties from a mustard gas bombardment largely because the men were unable to detect its presence. Odd, you say, remembering the garlic aromas emanating from sniff sets? Apparently things are different on the battlefield. Mustard is hard to detect when mingled with the other smells of the battlefield.

As one division gas officer reported: "The woods are full of various odors . . . dead animals, crushed foliage, upturned earth and rotten wood, HE, and gas. [I have] walked for miles thru these woods . . . without wearing a mask." And the 1st Division was to find that the newly developed German Lorraine Cross shell, a munition which combined mustard and HE, added to the difficulties of identification.

Other casualties came from surprise attacks, from the early removal of the mask, or from the failure of men to wear masks in areas of low gas concentration. (A Chemical Warfare Service report called attention to the fact that officers and men were prone to underestimate the danger of low concentrations of gas and were willing to take a chance without their masks.)

Carelessness, weariness and ignorance all played a part in producing gas casualties. And some came from the improper actions and reactions of the replacement, officers and men alike. The replacement has always been fair game. During the month of October 1918, for example, the 89th Division suffered over 1100 gas casualties, the large majority of which were the result of "flagrant breaches of gas discipline." Seventy-five per cent of these casualties were replacements who had not had the full cycle of training enjoyed by the rest of the unit.

Contributing to the problem of gas warfare discipline was the practice of burdening unit gas officers with additional duties. In August 1918, for example, the heavy casualties suffered by an Infantry division under an enemy gas attack were attributed

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by the division inspector to its "incomplete instruction in gas defense." Not only were the gas officers and noncommissioned officers of this organization regularly assigned to other duties, but at the time of the attack a good many of them were pursuing these duties in the rear area.

Less than two months later another bombardment produced abnormally high casualties in a regiment of the same division. Investigation by the division gas officer showed that almost without exception his counterparts on the regimental and battalion level were in the rear area performing duties other than those pertaining to gas warfare.

These examples of the breakdown of training and discipline are only a few of the many that characterized gas warfare operations in World War I. They abound in lessons of human reaction and tactical application. And without difficulty we can recognize in them weaknesses which exist in the Army today. Our unit CBR officers, descendents of the World War I gas officer, are all too often chosen carelessly. And even the highly motivated CBR officer finds himself hampered by inertia, red tape and custom.

In many units, gas masks stay safely in inspection order in the supply room and never see use except for the periodic (but infrequent) trip through the gas chamber.

CBR plans are often verbose and as ludicrously useless as the ". . . rub your hands . . ." advice. And those plans which *are* of some use stay securely locked in the safe—a mystery to all but the privileged very few.

When gas masks *are* carried in training their use is often unrealistic and given only lip service. A day or two of wearing even our modern, comparatively comfortable mask would rapidly drive home the grim seriousness of a chemical attack—but how many units have even considered the possibility of such a training period?

World War I has faded into obscurity—the lessons of more recent days crowd it from our minds. But its lessons regarding gas are the only ones we have.

Realistically, we must pay attention to them—or live again with "too little and too late."

# COMBAT LESSONS

Following are extracts from *Combat Lessons* (World War II Combat Reports) and *Combat Report from Korea.* They are brief, pertinent and worthwhile to Infantrymen.

**Platoon sergeant:** ". . . Men assigned to an Infantry company must be able to use all weapons assigned to the company since, sooner or later, they will be forced into a position in which they must use them."

**Mess sergeant:** "Meal hours should be varied. In a defensive position in France we had our kitchen situated about 600 yards from the front lines. Hot meals were served at 0600, 1200 and 1700. As a result, we were shelled daily."

**Communications officer:** "Have as many alternate means of communication as possible. If the mechanical means fail, never delay a message until they are repaired. A runner, sent off immediately, will usually get there first."

**Motor officer:** "Maintenance personnel should have familiarization firing with all weapons used on combat vehicles. Enemy units frequently penetrate as far as maintenance installations, and such areas must be defended with every available weapon."

**Platoon leader:** "Every man in the squad should listen to his squad leader's orders with the thought in mind that he may have to be the squad leader before the battle is over."

**Motor officer:** ". . . In the states, whenever a man got in trouble, they shipped him to the kitchen or the motor pool . . . as a result, I ended up with a good share of the eight balls. . . . We found out over here that some of the most important people are your cooks and drivers . . . and I'd like to recommend that assignment to these jobs be made on merit rather than on a punishment basis. . . ."

**Platoon sergeant:** ". . . Too many of our men have died needlessly from shock. . . . *Every* man should know the symptoms and the treatment. . . ."

**Company commander:** ". . . Every man in the company should know how to use a radio, including the proper radio procedure . . . they might also be oriented on the display of panels. . . ."

What tactical secrets lie . . .

# On The Other Side of the Hill . . .

. . . The reverse slope defense may provide the answer on the future battlefield

by 1st Lt Donald K. Bradbury

"Lou, what do you know about the reverse slope defense?"

"Not much. . . . Except that you have to control the crest and maintain forward security and observation. . . . That's about it. Why? What's up?"

"Well, the old man wants one worked into our next problem, and I've got the hot potato. Nobody seems to know any more about defending on the reverse slope than you do."

"Yeh, well . . . thanks for the compliment. See ya' around."

With minor variation, the foregoing conversation occurred at a coffee break not long ago—and the odds are that Lou's answer about covers what most people know about reverse slope tactics. Nor is the failing a new one. As long ago as 1942, American troops were learning about reverse slopes the hard way—from the enemy.

On 22 December 1942, the Allied drive for Tunis stumbled before "Longstop Hill." Faulty French maps, blinding cloud-cover and skillful German use of terrain combined to turn a seemingly simple operation into a nightmare. "Longstop" appeared, from the ground, to be a hill about two miles long and 800 feet high—but at the northeast end stood "El Rhar," a separate and distinct feature tied to Longstop by a deep and almost impassible gully (Figure 1).

El Rhar and the deceptively broken surface of Longstop disrupted the plan for the attack of the hill—a plan which called for a British battalion of Coldstream Guards to seize Longstop the night of 22-23 December and then be relieved before dawn by an American battalion.

The night was cloudy and dark; it started raining before dawn. After a 20-minute artillery preparation, the attack started and all companies took their objectives without much trouble. The British had seized what was apparently the high ground, and the Americans relieved them in position. However, before dawn the Germans began to counterattack, and by the 24th of December the Allies were going back up the hill to regain the position.

When the hill *was* regained, it was discovered that this was not the commanding ground. Surprisingly, it was found that there were *four* more ridge lines and all were occupied. Each ridge had German automatic weapons on the forward slope and positions organized on the reverse slope.

As a result of this organization of the ground, the automatic weapons of the German observation and security troops made our troops fight up the hill; as they reached the crest, our troops were then subjected to heavy fire from the reverse slope and the observation and security groups on the second ridge. The troops would then have to fight their way down the reverse slope through this fire and the enemy positions in order to reach the forward slope of the second ridge.

This deadly process was repeated on each ridge. By the evening of the 24th, an all-out assault of the third ridge gained the crest—only to discover that the El Rhar feature was protected by a deep gully. Heavy fire and German counterattacks from El Rhar repulsed every effort, with casualties by this time reaching 200 British and 300 American killed or wounded.

Eventually, a fresh Infantry brigade was committed and cleared the hill. By this time, however, our attack toward Tunis had swung wide and bypassed the position.

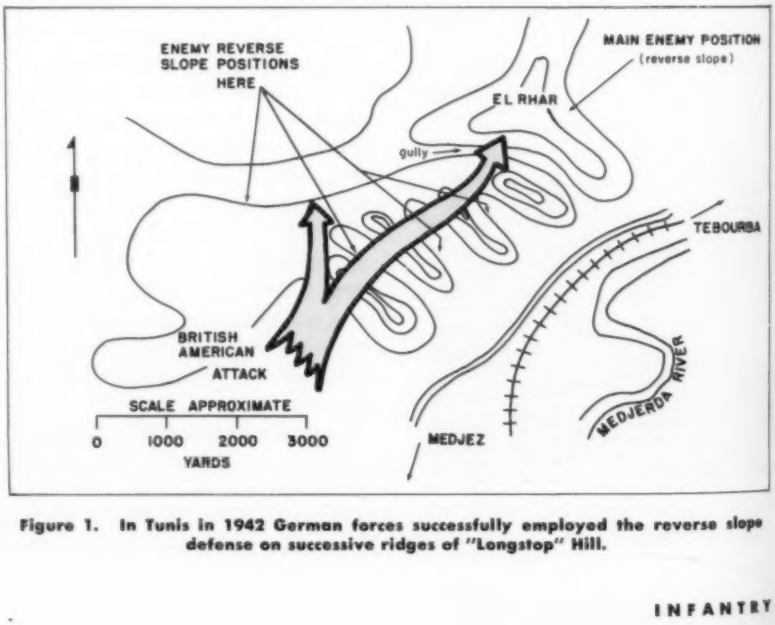


**Figure 1. In Tunis in 1942 German forces successfully employed the reverse slope defense on successive ridges of "Longstop" Hill.**

Upon analyzing this example, we may tend to place the blame on faulty intelligence, poor reconnaissance and poor maps. These may have contributed to the incident, but the fact remains that the Germans *did* fight courageously and make maximum use of the terrain. They followed the techniques of reverse slope defense and thereby gained all the advantages. They controlled the crests and were defeated only after much time and materiel and many men had been expended.

It is interesting to consider whether we would have used a reverse slope defense in the same situation—and if we had, what would have been the result. Our techniques of today are not much different than those used by the Germans at El Rhar. According to our current doctrine, the reverse slope is organized for the defense according to basic defensive considerations, and it is normally conducted by units not larger than the rifle company. With the company as a base, a reverse slope defense might look much like Figure 2.

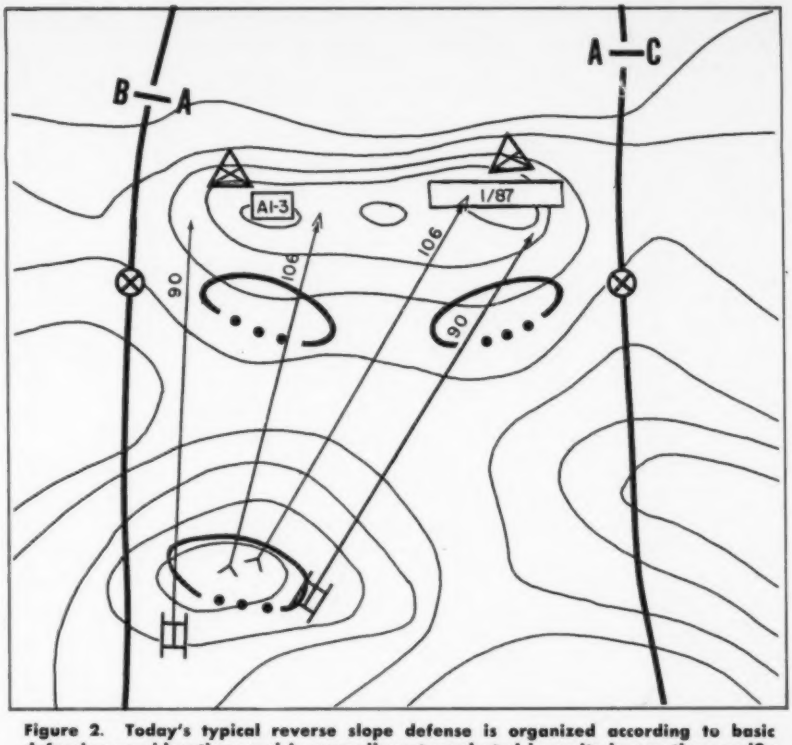


**Figure 2. Today's typical reverse slope defense is organized according to basic defensive considerations and is normally not conducted by units larger than a rifle company.**

The forward platoons are located at least 200 meters from the crest of the hill (to allow riflemen and gunners to place aimed fire), and are not more than 400 meters from the crest so that small arms fire will be within effective range. Individuals and weapons are positioned to permit maximum effective surprise fire on the crest, on the approaches around the crest, and on forward slopes of adjacent terrain features.

All of the forward platoons need not be placed on the reverse slope. One or more may be moved to the forward slope to take advantage of longer fields of fire and to develop an earlier and stronger defense of the position. If the situation allows, a desirable location for the reserve platoon(s) would be on the military crest of the next high ground to the rear where direct fire support could be provided.

Possible enemy approaches to the position are considered, and on the critical approaches are placed observation and security (O and S) groups (normally from the reserve platoon), which may vary from two men to a rifle squad. Positioned just forward of the crest, these groups give warning of enemy activity and can observe and direct fire on the enemy in order to delay, deceive and disorganize him.

Although the antitank squads are normally located well forward in the battle area, it is better in this case to position them in the vicinity of the reserve platoon to permit longer fields of fire. This also holds true for tanks when they are employed with the company in a reverse slope defense. However, tanks and antitank weapons may also be employed initially with the observation and security groups in a further effort to delay and deceive the enemy.

Artillery and mortar concentrations are planned as in normal defensive situations, but special attention is given to locating concentrations on and near the crest. Locations for barrages in the reverse slope defense are normally on the most critical portion of the topographical crest. If the platoons are 400 meters back, it may be more advantageous to locate barrages closer to the FEBA than directly on the crest. It must be remembered, however, that the key to a successful reverse slope defense *is* control of the crest.

The conduct of this defense generally parallels that of a forward slope. The O & S groups warn the commander of the enemy's approach. They report his activity and movements and take him under fire at long ranges. During periods of limited visibility, illuminating devices such as searchlights, flares and infrared are used extensively. When the O & S groups are forced to withdraw, prearranged artillery and mortar concentrations are delivered on the forward slope to hinder the enemy's attempt to mass for an assault. Automatic weapons with the O & S groups withdraw first and occupy their primary firing positions before the enemy reaches the crest.

Direct fire weapons on the reverse slope hold their fires until suitable targets appear. As the enemy crosses over the crest, all direct and indirect fire weapons which are capable of doing so fire in support of the threatened area. If the enemy succeeds in making a penetration, the reserve contains the enemy force or counterattacks to destroy or eject him. If possible, the O & S groups are reestablished.

The major disadvantages of the reverse slope defense are obvious. Observation of the enemy is difficult to maintain and, after the O & S groups withdraw, effective indirect fire on the forward slope is limited. Also, the range of direct fire weapons is restricted. Moreover, obstacles and minefields on the forward slope cannot be covered by direct fire weapons, and if the crest is seized by the enemy, he has the advantage of continuing the attack downhill into the friendly position.

While the disadvantages are likely to discourage a commander from organizing the reverse slope for defense, the advantages cannot be overlooked. Consider these:

- The forward elements are protected from enemy direct fire, ground observation and observed indirect fire.
- If the enemy has been deceived as to the true defensive position, he may advance too close to employ nuclear weapons without endangering his own forces.
- On the reverse slope, the defender has freedom of movement which allows him to better organize and make more detailed improvements of his emplacements. It also facilitates ease of supply and rest for the men.
- Certainly not the least consideration is the protection afforded the defender from the effects of a nuclear detonation beyond the crest to his front. The hill mass will attenuate some of the effects, depending upon the height of burst, the distance from ground zero and the degree of slope of the back side.

The skillful commander will therefore carefully weigh the advantages and disadvantages of the reverse slope and when conditions indicate, will unhesitatingly adopt it.

Some of the conditions under which the reverse slope defense may be adopted are these: a forward slope made untenable by enemy fire; when terrain on the reverse slope offers better fields of fire than the forward slope; when it is desirable to avoid a dangerous salient or reentrant; or, when the forward slope has been lost or not yet gained.

However successfully our foes have made use of the reverse slope, there have also been instances of notable American success.

On the 15th of March 1943, in Tunisia, the battle for Gafsa and El Guettar began with the 18th Infantry capturing these cities in that order. On the 20th of March, the regiment was attacking to the east of El Guettar along a valley which sloped from around 2000 feet at the shoulders of flanking ridges to desert level where the valley ended at Gables. There was little or no vegetation in this area.

The regiment was advancing from El Guettar with the 1st Battalion on the right shoulder of the valley and the 3d Battalion on the left shoulder. Just as the regiment approached the hills to the east of El Guettar, it was ordered to go into defensive positions. The 3d Battalion on the left shoulder, with its right flank company (Company K) extending down toward the floor of the valley, covered the midpoint by fire. The valley was about four miles wide (Figure 3).

Dispositions within Company K placed the 1st Platoon on a forward hill with the 2d and 3d Platoons to its right and left rear respectively. The hill occupied by the 1st Platoon was about 200 yards in width along the front, and it angled across the long axis of the valley at about forty-five degrees. The forward slope was gradual and even. The reverse slope was steep (about a thirty degree slope) and was cut by a wadi or ditch about four feet wide and five feet deep, which ran generally parallel with the crest, about fifteen yards down the reverse slope.

It was in this wadi, on the 22d of March, that the 1st platoon leader devised a unique plan. The forward slopes of his hill were under scattered small arms fire, and intelligence reports stated that the enemy, elements of an armored division, was expected to attack.

The lieutenant crawled up to the crest to pick positions for the defense of his hill, but when he stuck his head over the crest, slugs spattered rock fragments down his neck. He ducked behind the protection of the crest and considered his position. He had, in addition to his platoon, an attached LMG section and one 60mm mortar squad. He could put his LMGs and BARs on the crest and wait until night to further organize his position. However, he knew he could expect an attack at any time.

The lieutenant also knew that the Germans had been using reverse slope positions to good advantage since the African Campaign started—and they had been tough positions to take. He looked his position over under the new light of setting up behind the protecting crest.

The crest would give him complete concealment from ground observation and cover from the enemy automatic weapons fire that was now being placed on the forward slopes. It would also give protection against *any* enemy flat trajectory weapons, particularly those of the German tanks which were expected. Mortar fire effects would be greatly lessened since the concealment offered by the crest hampered enemy observation.

His decision made, the lieutenant put the platoon in along the wadi, spacing his men five yards apart, three squads on line. Each man dug himself a foxhole against the forward bank. The grenadiers were placed on the flanks and the 60mm mortar squad went into position in the wadi near the platoon CP, which was located in the center of the platoon

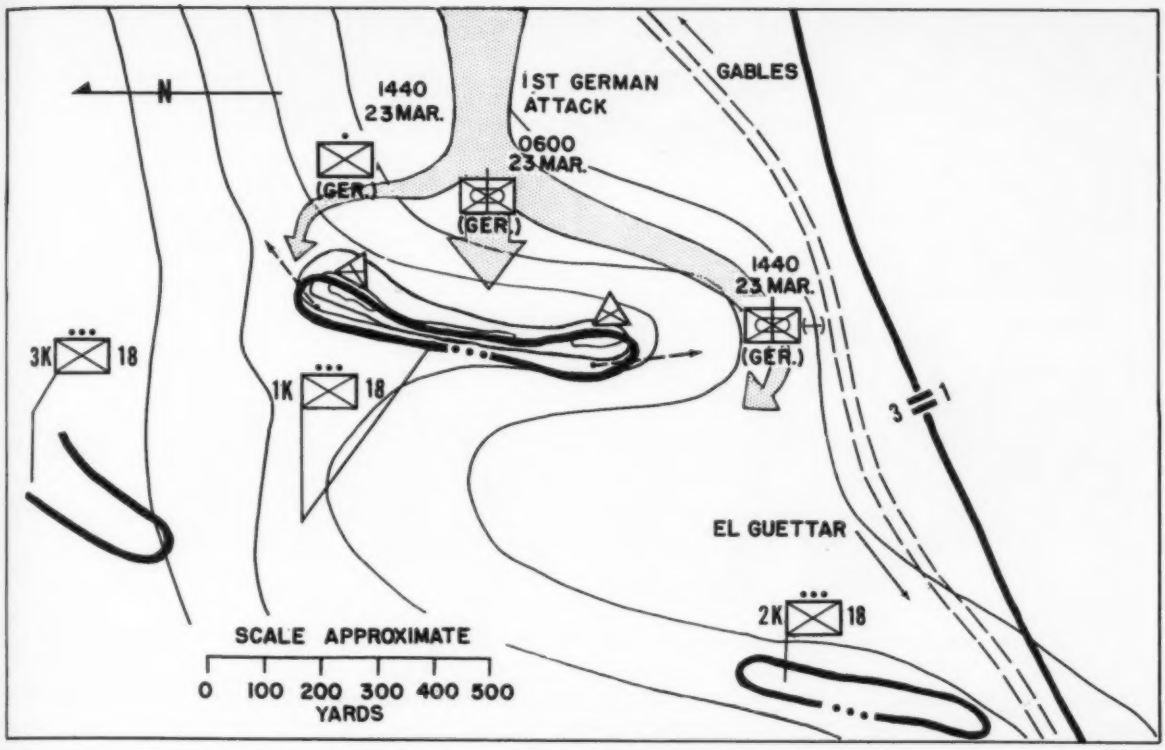


**Figure 3. In March 1943 an American infantry platoon used the reverse slope defense to stop a major German attack, inflicting 500 German casualties while suffering seven of their own.**

position.

The section of LMGs was split, one going in on each flank, firing along the crest. This position also enabled them to give flank protection. The BARs were checked to ensure they could cover the entire crest and two OPs were organized on the crest for forward observation.

The rest of the day was spent in improving the position. When darkness began to fall, and still the attack had not come, the lieutenant had every man move straight forward and dig in just ahead of the crest in the same relative position he had occupied on the reverse slope. By midnight the digging was complete. The rest of the night was spent with half of the platoon on watch while the other half slept.

The platoon was alerted at 0600 hours by the sound of motors and steel tracks ringing on the rocks. The word was passed to hold all fire. German tanks passed the flanks of the platoon position and disappeared to the rear.

As the sun came up, the OPs reported a line of half tracks about 700 yards to the platoon's front. As these advanced, enemy fires began to fall on the platoon position, and the man next to the platoon leader was hit almost immediately. Shortly thereafter, the lieuenant passed the word, "Back into the reverse slope positions." The platoon then slid back over the crest into the cover of the wadi and the holes prepared the day before. The lieutenant ordered his platoon to ". . . Hold your fire! Don't open up until you hear me!"

The sound of motors could be heard approaching on the other side of the hill, and then there was a deep roar as the half tracks mounted the slope. The noise suddenly stopped and came no closer.

There was a five-minute silence, then a German officer and his runner appeared on the crest. The lieutenant gave the German time to wave his men forward and then shot him. The platoon sergeant got the runner. German Infantry poured over the crest and the Americans opened up with LMGs, BARs and M1 rifles. No German got far enough forward for his body to roll into the wadi.

In the next hour, three more attacks came over the crest with the same results. After the failure of the last attack, the survivors stayed behind the crest and threw grenades. A warning system was improvised on the spot and worked perfectly. When a German grenade flew over the crest, the men who saw it yelled and everyone ducked into their holes. After each explosion, grenades were thrown back. The 60mm mortar also brought shells in on the Germans on the forward slopes with good effect.

The Germans again renewed their attack at 1440 hours. They had studied the ground carefully, and this time were determined to take the position. They sent a squad around the Americans' left and drove up the valley on the right with a company in halftracks. The LMG and other weapons on the left flank eliminated the German squad.

**The reverse slope defense provides the Infantry commander with another effective tactical tool.**

Over on the right flank, the rifle grenadiers had a field day. They stopped the halftracks, and the LMG and rifle fire took care of the riders. The Germans made a determined effort as they scattered from the halftracks and tried to work up the hill on foot, but there was little cover and they found it a hopeless task. The few survivors gave up and got out as best they could.

By 1700 hours all enemy attacks had been repulsed. The Infantry accompanying the German tanks were unable to assault any other point on the left of the valley without reducing this forward strong point; this they had been unable to do. In their attempts, they had lost 500 men either killed or wounded, and five halftracks had been destroyed. An American party was later sent forward to check the crest and put back the OPs for forward observation. They saw the surviving Germans withdrawing down the valley from where they had come that morning.

A check of the condition of the platoon found one rifleman dead and six wounded—and all the wounded were able to walk back to the battalion aid station.

In analyzing this action, we find a platoon defending in a reverse slope position against attacks made by an enemy who greatly outnumbered the defender. The attacks were determined and fierce, as indicated by the numerous attempts made by the Germans to dislodge the platoon, and by the 500 casualties they suffered in so doing.

The topographical crest immediately to the platoon's front served it well in giving cover and concealment and in gaining surprise—the initial enemy attack came boldly across the crest with no preparatory fires. Furthermore, after the enemy was driven off of the crest, he was able to bring only grenades to bear on the platoon position. The platoon suffered only seven casualties, although under heavy attack for most of the day, thus indicating that the fires the enemy *was* able to deliver on the platoon position were negligible.

In addition to gaining surprise, cover and concealment, the platoon's primary positions served well to meet the envelopment which the enemy later brought against its flanks and rear. Thus it is apparent that the reverse slope defense was the right answer in this situation.

But is the reverse slope the answer to *all* of our defensive problems? Obviously it is not. It is simply another means of defense, which, at the right time and place, can be used effectively to achieve victory. For this reason, it deserves the attention and study of every Infantry commander.

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* 1ST LT DONALD K. BRADBURY, a 1954 graduate of the United States Military Academy, attended the Basic Infantry Officers Course and the Ranger Course that same year. He then served with the 13th Infantry at Fort Carson and in Ulm, Germany, as a platoon leader, company executive officer and assistant S3. While in Germany, he attended the Air-Ground Operations School in Ramstein and the Nuclear Weapons Employment Course at Oberammergau. Lieutenant Bradbury, a 1960 graduate of the Advanced Course, is presently assigned to the ROTC Instructor Group, Norwich University, Northfield, Vermont.

Source Material: *Defense Action of 18th Infantry from* Infantry Journal *(Feb 44) courtesy of* Army *magazine. Assault of "Longstop" Hill from participating unit combat journals. Current reverse slope defense tactics described on pages 57-58 are in consonance with current United States Army Infantry School instruction.*

# TRICKS OF THE TRADE

## BUILDING A BETTER MAP CASE

Leaders of small Infantry units are often heard complaining about the lack of a practical manner in which to carry their tactical maps when involved in field exercises. Even though there have been numerous items recently developed for Infantrymen to aid them in doing their job, nothing has been produced to facilitate the easy handling of a tactical map.

Until a major breakthrough is made in this direction, a very practical and easy-to-make substitute can be used. Take a piece of clear plastic automobile seatcover material 26 inches long and 12 inches wide; fold a six-inch section from each end toward the center; stitch along the upper and lower edges of the folds, thus forming two 6- by 12-inch pockets in which the map may be inserted. The end product will be a map holder that will satisfy the needs of any combat commander.

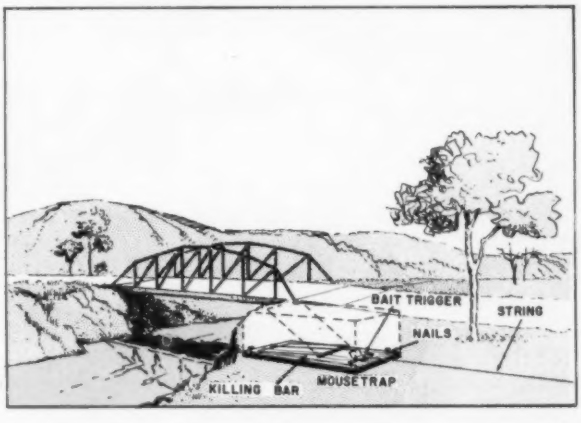
This simple, "homemade" map container has a number of useful features:

- There is an unobstructed viewing area of 12 by 14 inches on front and rear when it is open.
- It is water resistant.
- It is completely flexible and may be rolled or folded in any fashion desired.
- The plastic material somewhat adheres to itself, won't rub or slide against itself when being carried and, therefore, grease pencil markings stay where they are put and don't rub off.

Lt Alex Lee, USMC

## HOW TO MOUSETRAP A BRIDGE

Whenever a little ingenuity is injected into unit training, the classroom becomes an interesting as well as profitable place for the instructor and student. What is more important, learning comes a lot easier. Here is an example of what ingenuity can do:




A mousetrap, when used as shown here, can simulate the blowing up of a bridge. The training aid is most effective when constructed as follows:

- Nail the mousetrap to the surface of a sand table.
- Attach a light piece of string to the bait-trigger and run the string to the instructor's side of the table. Test trap and reset.
- Cover the trap and string with sand. Take care not to set off the trap.
- Place the end of the bridge to be blown directly over mousetrap's "killing bar." Then complete the construction of your sand table.

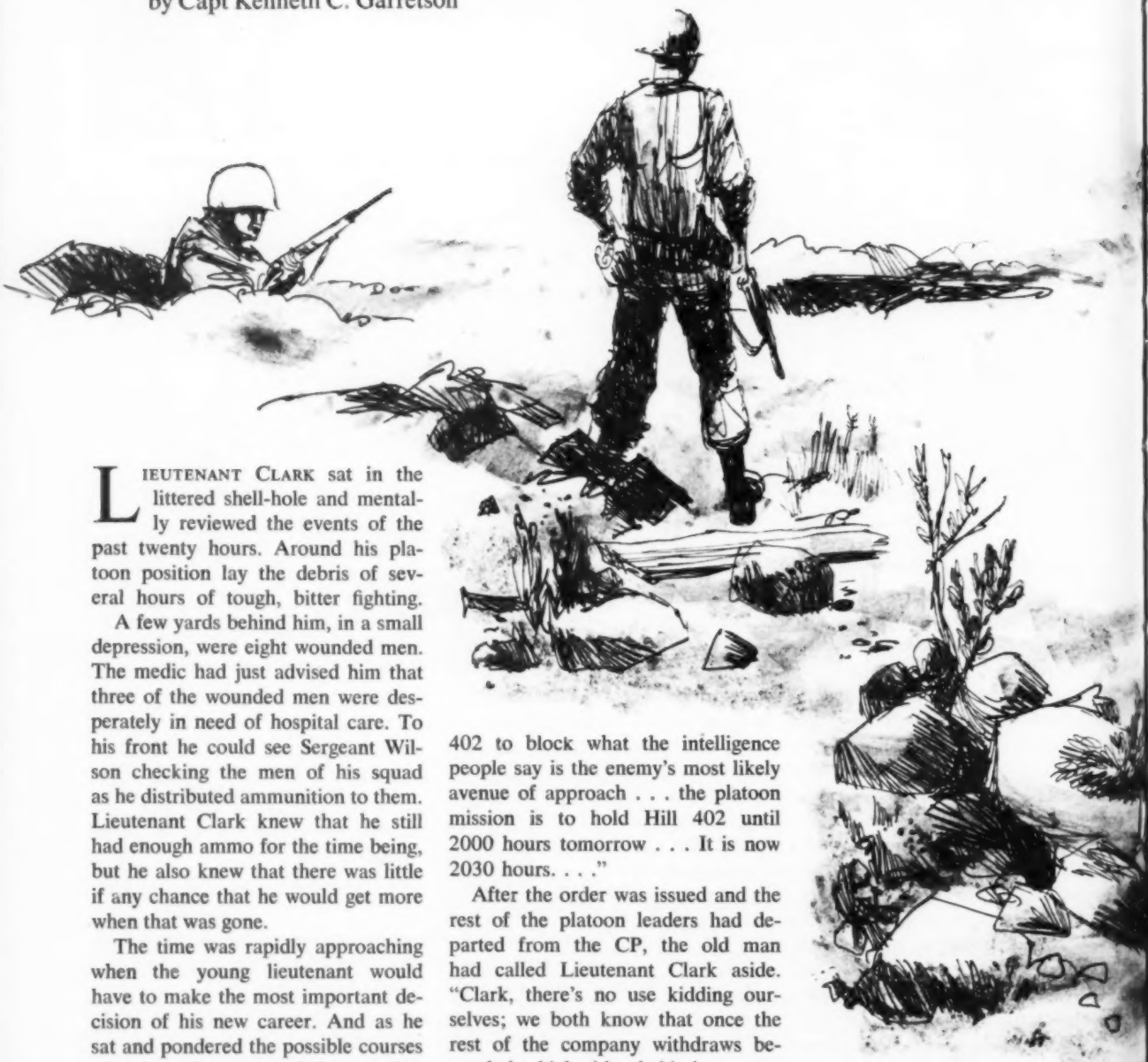
During the recitation, the instructor blows the bridge at the most opportune moment to create surprise and realism. Similarly, mousetraps can be placed throughout the sand table to simulate artillery, mortar or bomb explosions.

## WANTED: IDEAS

If you have any ideas on how instructors can spark up unit training through the use of ingenious, easy-to-make training devices, send them in. If your idea is accepted, regular *Infantry* rates will, of course, be paid.—*Editor.*

# ISOLATION

by Capt Kenneth C. Garretson



LIEUTENANT CLARK sat in the littered shell-hole and mentally reviewed the events of the past twenty hours. Around his platoon position lay the debris of several hours of tough, bitter fighting.

A few yards behind him, in a small depression, were eight wounded men. The medic had just advised him that three of the wounded men were desperately in need of hospital care. To his front he could see Sergeant Wilson checking the men of his squad as he distributed ammunition to them. Lieutenant Clark knew that he still had enough ammo for the time being, but he also knew that there was little if any chance that he would get more when that was gone.

The time was rapidly approaching when the young lieutenant would have to make the most important decision of his new career. And as he sat and pondered the possible courses of action, the events of the past few hours tumbled through his mind. . . .

It had all begun the night before when the company commander issued the order to withdraw: ". . . Our battle group has been ordered to pull back to the Swotow River . . . Lieutenant Clark and his platoon will remain in their present position on Hill 402 to block what the intelligence people say is the enemy's most likely avenue of approach . . . the platoon mission is to hold Hill 402 until 2000 hours tomorrow . . . It is now 2030 hours. . . ."

After the order was issued and the rest of the platoon leaders had departed from the CP, the old man had called Lieutenant Clark aside. "Clark, there's no use kidding ourselves; we both know that once the rest of the company withdraws beyond the high ridge behind us, your platoon is not going to be able to communicate with us . . . or with anyone else. Because of the likelihood of communication failure, I am giving you the authority now to move your men back to friendly lines in any manner you see fit, after the completion of your mission. . . ."

As this conversation now ran through his mind, Lieutenant Clark smiled inwardly at the company commander's parting phrase about having authority to move back "after the completion of your mission." Unfortunately, it didn't turn out that easy.

*What are the alternatives when a unit is surrounded...*

*cut off ... isolated ...*

The rest of the company had pulled out that same night at 2100 hours, and, as expected, Lieutenant Clark's platoon lost communication with friendly units a couple of hours later. At 2400 hours the enemy started probing his position. The pressure built up gradually until 0300 hours when the roof fell in. From 0300 to 0600 it had been touch and go.

At daylight, the enemy pulled back, but Lieutenant Clark felt sure that darkness would bring another attack. All day long he had watched small groups of the enemy bypassing his position, moving on foot well out of range of his small arms. There was little doubt in his mind that the enemy was anxious to move some of his heavy guns forward. But to do so in this sector, he would have to neutralize the platoon on Hill 402.

HERE it is, Clark thought. Add it all up and it comes out to a big, fat zero. Our mission will be completed in a couple of more hours. We will have blocked the enemy's avenue of approach. Mission accomplished. But then what? Here we are —surrounded, cut off, isolated.

Thus it was that Lieutenant Clark pondered over his decision, considering first one course of action, then another—weighing the possible consequences of each. Finally, he rose slowly and sent his runner after the platoon sergeant and squad leaders. He had made his decision. He was now ready to give the order.

But let us leave Lieutenant Clark for a while. Let us put *You* in his place. What is your knowledge of the possible courses of action? What would you do in such a situation?

**Before the commander of an isolated unit makes the fateful decision, he must consider every variable factor — and every eventuality.**

What would your decision be?

Before you answer, let us consider some of the facts concerning such a situation as this—*isolation* on the battlefield. When a unit is truly isolated, it has lost all possible means of communication with friendly forces and is physically surrounded or cut off by enemy forces. Isolation is not new to the battlefield. We are told that in the classic Battle of Cannae, a Roman army of 75,000 was isolated and completely annihilated. At the Battle of Stalingrad in World War II, an estimated 330,000 Germans were killed or captured after they were encircled and isolated. So we have a precedent. What is more important, we also have an omen for the future.

Nearly all authorities on the subject agree that isolation will not be an uncommon occurrence during any future war. Department of the Army Pamphlet 355-6 puts it like this: "The need to disperse against the threat of nuclear attack will create highly fluid conditions which will force units into situations requiring friendly elements to be widely separated and in some instances completely isolated for varying periods of time."

"Highly fluid conditions" might be translated as "chaos and confusion" in many situations. Certainly, with the advent of nuclear weapons and the resultant dispersion of units on the battlefield, the classical drawn battle line is a thing of the past. Thus, the topic of isolation takes on increased importance, especially to Infantry officers. Let us consider, therefore, some of the possible courses of action which are available to Lieutenant Clark—or you.

WHEN a unit becomes isolated, it may do one of the following: first, it may hold the position and defend it; second, it may try evasion and escape to friendly lines, either in groups or as individuals; finally, it may fight on. In continuing to fight, a unit may attempt to return to friendly lines or to penetrate deeper into enemy territory and conduct guerrilla-type operations. If you were in Lieutenant Clark's position, which of these courses of action would you decide upon? Again, before you decide, let us take a closer look at these three possibilities.

- *Holding and defending the position:* The decision to defend an isolated position is based primarily on the likelihood of relief by friendly forces or withdrawal by the enemy. By defending his position, the commander of the isolated unit runs the risk of total destruction or capture of his unit. On the other hand, a determined defense, skillfully conducted, may sometimes cause the enemy commander to re-evaluate the desirability of your particular piece of real estate.

This is not to imply that the commander should hold his position until the enemy launches a full scale, coordinated attack with a vastly superior force. It does mean, however, that the commander must repulse enemy patrol and probing action and, from this, assess enemy intentions. For example, if the enemy carries out a determined probing action in the various sectors of the position in order to determine the limits and composition of your defense, it is logical to assume that he is going to attack in force later.

Of course, the decision which the commander makes must take into consideration the mission, the terrain, the status of supplies and ammunition, and the possibility of resupply. Additionally, the unit must have sufficient remaining combat strength to defend the position. These are just a few of the considerations which will bear upon the decision to hold and defend a piece of terrain.

- *Evasion and escape to friendly lines:* Evasion and escape implies action by small groups or by individuals to avoid capture and return to friendly lines by infiltrating through enemy territory. This method of escape has long been used by the Army whenever the situation required. In fact, training in certain principles and techniques of infiltration is required for

all men ordered to overseas stations. We must remember, however, that breaking up a unit may lessen each man's chances for survival. It is usually better in combat to keep a group together.

The greatest hazard in the decision to use individual infiltration is that it may cause the premature breakup of a unit which otherwise might retain its tactical integrity and continue to function as a combat unit. Thus, unit integrity should be maintained whenever possible. Of course, regardless of which method of evasion and escape is used—individually or as a unit—consideration should be given to the aggressiveness, physical condition and the overall capability of the force to succeed. All of these will have a bearing on the commander's decision.

• *Fighting out:* In utilizing the third course of action, fighting out of an isolated position, there are two alternatives to consider: The unit may fight its way back to friendly lines or, in certain situations, it may fight deeper into enemy territory. A successful breakout to friendly lines depends considerably upon the ability of leaders to act rapidly and skillfully in determining enemy weakness and strength. Also, these leaders must be able to evaluate the terrain and its usefulness to them, and to formulate rapidly and use a simple, well-executed plan to catch the enemy off guard.

THE fighting capability and leadership of a unit figure highly in its ability to accomplish a breakout action. Speed is also essential in preparing for and executing a breakout. In all probability, the enemy has no more information concerning the condition of the isolated unit than the unit does about him. And since the enemy's intelligence-gathering elements are oriented well forward, this may allow an isolated unit (particularly in the enemy's rear area) certain freedom of action. However, the longer a breakout is delayed, the more these advantages pass over to the enemy.

**The success of an encircled unit depends in great part upon the mutual trust, confidence and teamwork imbued in the unit.**

In some instances, penetrating deeper into enemy territory offers advantages which make it a practical and desirable course of action. For example, in mass attacks by numerically large enemy forces, their goal may well be penetration of battle positions and isolation and destruction of opposing units. Sometimes, the momentum of the attack carries the bulk of the enemy forces to their opponent's rear. A good chance exists, therefore, that if forces of the attacked unit penetrate into the enemy's rear area, they may find these areas comparatively lightly manned and occupied mainly by service and support troops.

However, a commander choosing to fight deeper into enemy territory should have a broad knowledge of guerrilla operations. He must be able to select an operating area that offers suitable prospects for concealment and maneuver. He must also be alert to exploit every opportunity for offensive action against the enemy. Of course, deeper penetration is primarily for short term duration and, except in an extreme emergency, the commander should not consider this plan for attack unless there exists within the unit a plan for resupply and linkup with isolated units.

In essence, that's about it. To hold and defend, to evade and escape, or to fight on: These are the possibilities. Obviously, there are many variable factors to be considered before choosing any one course of action. Lieutenant Clark's decision—your decision—would depend upon these variable factors.

And what was Lieutenant Clark's decision? To find out, let us follow his reasoning in this matter. Lieutenant Clark considered that his mission would be accomplished by 2000 that night. By that time the enemy would have considerable force between his platoon and his parent

company. He also considered that his platoon had wounded men in urgent need of hospital care. Further, although his ammunition supply was adequate for the moment, there was little chance of resupply. Also, he remembered that the company commander had implied that he was expected to lead his men back to friendly lines, albeit in any way he chose. In view of these facts, Lieutenant Clark knew that he should not remain unduly long in the same isolated position. This therefore precluded holding onto and defending his current position or fighting deeper into enemy territory. It seemed to suggest instead the alternatives of fighting out as a unit or infiltrating out as individuals.

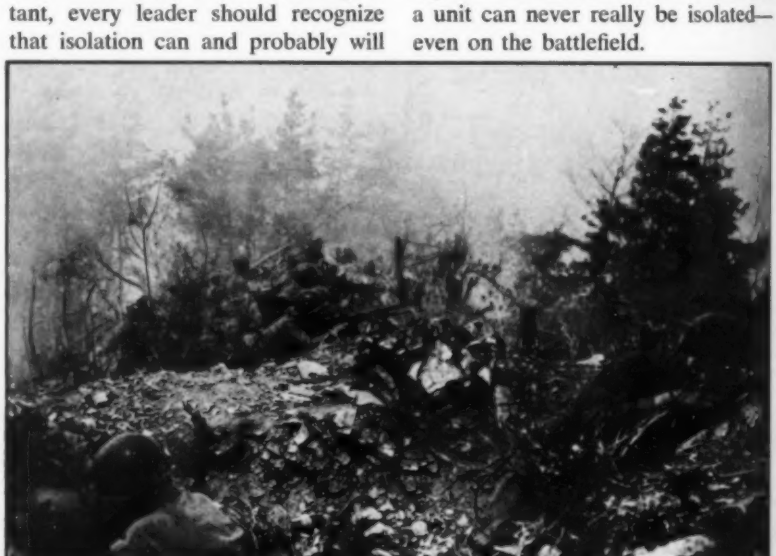
IN DECIDING between these two alternatives, Lieutenant Clark could not help thinking of the plight of the wounded men of his platoon. Evacuating them properly would be difficult in an individual infiltration maneuver. Having been able to observe the enemy forces moving just out of range of his weapons all day, Lieutenant Clark had an approximate idea of how many troops the enemy had in the general area. And having earlier occupied the territory into which the enemy troops were moving, he had an exact knowledge of the terrain, and could surmise their positions on this terrain. Lieutenant Clark also reasoned that the enemy forces would be oriented forward toward the main body of U. S. troops, with less defensive strength to the rear. He decided, therefore, to move his platoon back to friendly lines as a unit, fighting if it became necessary.

He then organized his platoon for the breakout, and he spent the last few hours on Hill 402 making sure that he had considered every possible angle in this operation. He also made sure that every man knew the plan and his part in it. When he wrapped up the final details (tactical formation, actions if ambushed, routes, rally points, etc.) he was confident that his first big battlefield decision had been a wise one—and he was right.

**Two major factors affecting the commander's decision are the status and disposition of wounded and the physical condition of the encircled unit.**

But how would your decision compare with Lieutenant Clark's? Chances are that you may have just such a decision to make some day. Before decision-making time arrives, however, it might be well to contemplate the possible courses of action for an isolated unit. It might also be wise for every Infantry leader to consider now some of the problems which may complicate any decision involving such an isolated unit. More important, every leader should recognize that isolation can and probably will be a regular part of future battlefield environment.

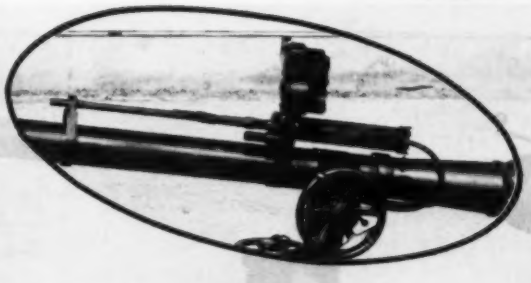
Lastly, Infantry commanders might gain a lot for their units if isolation were made an integral part of their tactical training. If units can practice and get the feel of isolation in training, they will be better prepared to cope with it when it happens on the battlefield. History has shown that prior experience—and proper training—are formidable allies from which a unit can never really be isolated—even on the battlefield.

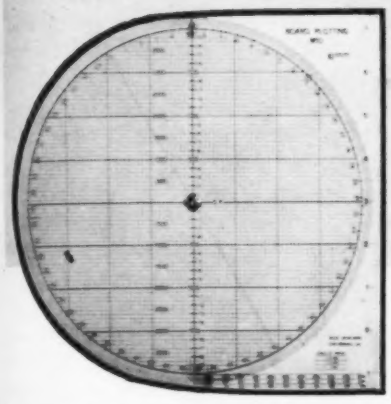


**The decision to defend in place or break out depends in great part upon the probability of relief.**

A new technique for obtaining rapid and accurate mortar and artillery fire.

# FIRE FOR EFFECT





by 2nd Lt Cosmo M. Barone

WITH THE HELP of these three "gadgets" (a spotting rifle, a plotting board and a compass), an observer relatively unskilled in artillery procedures can obtain rapid and accurate mortar and artillery fires *without* adjustment.

Here's how it works: The observer (with M-10 plotting board, compass and a 106mm recoilless rifle) is positioned in a rifle platoon area or at any vantage point. Initially, he calls Fire Direction Center (FDC) and requests registration on a point to his front. When registration is completed, the observer does the following:

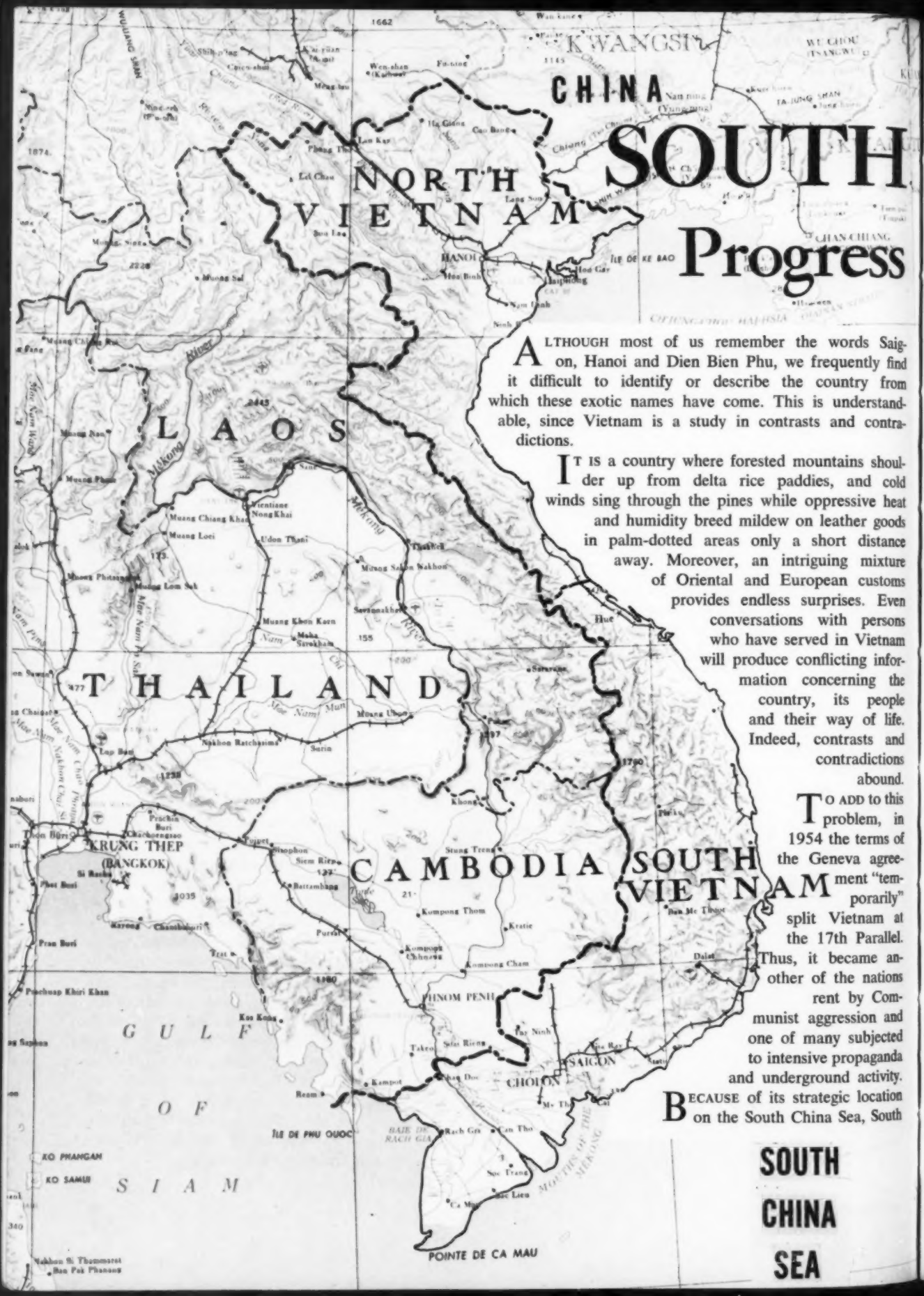
- Measures azimuth with compass from his position to the registration point (RP).
- Fires spotting rifle (on the 106mm recoilless rifle) and hits RP.
- Reads range from his position to RP by using spotting rifle's M72D sight.
- Plots RP on M-10 plotting board with his position at center.
- Reports to FDC the range and azimuth from his position to RP.

From this data the FDC then locates the observer's position on its map, grid sheet or plotting board; it is then ready to accept fire requests.

For any target of opportunity, the observer measures the observer-target (OT) azimuth, registers on the target with spotting rifle to determine range, and reports OT azimuth and range to the FDC. The FDC in turn promply plots the target and delivers the requested surprise fire for effect. This system is also adaptable to nighttime use since these .50 caliber impacts can be seen in the dark, and the M72D sight can be illuminated.

As time is available to him, the observer can continue to register his spotting rifle on various landmarks to his front until he has a complete and accurate map of the area within his view. When sufficient locations have thus been measured for azimuth and range, the observer no longer needs to use the spotting rifle, even on targets of opportunity. All he must do is report the azimuth and range of a previously selected landmark which is in the immediate vicinity of the new target. The FDC then delivers surprise fire onto the target.

Using the spotting rifle as a rangefinder has many advantages: it provides greater accuracy than heretofore possible, since the rifle is relatively unaffected by weather conditions; the spotting-rifle method is simpler and faster than using a standard Army rangefinder; in addition, since the 106mm recoilless rifle is organic to the rifle company (the standard rangefinder is not), this method can be used in almost every frontline platoon; and most important of all, the system is such that any responsible soldier of average intelligence can use it.




# SOUTH Progress

ALTHOUGH most of us remember the words Saigon, Hanoi and Dien Bien Phu, we frequently find it difficult to identify or describe the country from which these exotic names have come. This is understandable, since Vietnam is a study in contrasts and contradictions.

IT IS a country where forested mountains shoulder up from delta rice paddies, and cold winds sing through the pines while oppressive heat and humidity breed mildew on leather goods in palm-dotted areas only a short distance away. Moreover, an intriguing mixture of Oriental and European customs provides endless surprises. Even conversations with persons who have served in Vietnam will produce conflicting information concerning the country, its people and their way of life. Indeed, contrasts and contradictions abound.

TO ADD to this problem, in 1954 the terms of the Geneva agreement "temporarily" split Vietnam at the 17th Parallel. Thus, it became another of the nations rent by Communist aggression and one of many subjected to intensive propaganda and underground activity.

BECAUSE of its strategic location on the South China Sea, South

# VIETNAM

by Col Cyril D. Sterner

## in the shadow of the dragon

Vietnam has an important influence on Southeast Asian affairs. It controls the mouth of the mighty Mekong River which rises in Tibet and flows through China, Laos and Cambodia. In fact, the whole of Vietnam south and west of Saigon is made up of vast deltas of the Mekong and Saigon Rivers.

This rich delta area was once the "rice bowl" of French Indochina. Much of it has not been cultivated in recent years because the once elaborate and effective system of irrigation canals has not been maintained. However, the delta area's tremendous potential is still a prize which the Communists covet and which the South Vietnamese government is striving to protect and build up.

In Asia, where rice is the basic food and mouths multiply faster than the food supply, rice paddies are more than real estate. They represent economic and political power—even life itself. Thus, this valuable delta area is the scene of the most intensive subversive activity in Vietnam.

North Vietnam is bordered on the north by China and on the west by Laos. Since Laos has no outlet to the sea, all of its world trade must be shipped either across Vietnam or on the Mekong to and from the sea. Cambodia, which lies west of South Vietnam, also has depended upon shipping on the Mekong. Great efforts have been made recently by Cambodia to open a deep-water port on the Gulf of Siam to reduce the country's dependence on this river.

A long mountain chain stretches from the China border along the eastern coast of Vietnam as far south as Saigon. These mountains rise to 7500 feet at the highest point and are very steep and heavily forested with tropical rain jungle. The mountains tend to further isolate Laos and Cambodia from the South China Sea. A narrow coastal plain lies between the mountains and the sea. Inland from the mountains is a large plateau area which lies to the east of Cambodia. It is covered with grassy areas interspersed with thin woods.

Transportation in Vietnam is easy to describe. One railroad runs from Saigon up the coastal plain. Roads vary from good in the Saigon area to poor in most of the country. One good road parallels the railroad to Hanoi; another goes north from Saigon to the high plateau. Only three roads connect the plateau with the east coast. In the delta areas, the roads follow the dikes along the canals.

The port of Saigon is an excellent, large, deep-water port about 50 miles up the Saigon River. Here we find the largest drydock and repair facilities on the mainland of Asia between Hong Kong and Singapore. While natural harbors occur along the eastern coast, there are no dock facilities except for small coastal vessels.

A government-owned airline with regular flights of DC3s, 4s and 6s links the larger cities. Movement by air has proven to be the best means of travel in view of the rough terrain and the great distances between the larger towns. In this respect, it should be noted that South Vietnam is about 800 miles long and 30 to 150 miles wide.

South Vietnam's predominantly

**Rice paddies are more than real estate—they represent economic and political power in Southeast Asia.**

agricultural economy was almost wrecked by wartime destruction of its irrigation and transportation systems. These are being restored as rapidly as funds and conditions permit. Communist activity has aimed at disrupting this economic recovery in the hope that the people will lose faith in the government and its ability to protect and support them. Police and military posts are attacked, village chiefs are kidnapped or murdered and whole villages are threatened in an effort to spread terror and delay reconstruction.

Although much subversive activity and many acts of terrorism have occurred, the South Vietnam government and military forces have provided the security and stability essential for the development of the new Republic. Since the Communists' objectives have, for the most part, been thwarted by South Vietnamese military strength, threats and actual attacks have been made on American advisors to their armed forces. The fact that these attacks have been made is a good indication that American aid is effective.

The Vietnamese are a happy, friendly, poised and modest people who are conscious and proud of a culture stretching back 25 centuries into the dim recesses of history. There are also many minority groups which add to the country's contrasting nature. One of the most interesting groups is found in the central plateau where hundreds of thousands of pagan tribesmen live a primitive existence wearing loin cloths and hunting with spears and crossbows. Another significant element of the population is the million refugees from North Vietnam who have been resettled since 1954 as a result of the war.

The principal products of the country are rice, rubber, corn and duck feathers. Ducks are raised by the acre and the feathers are shipped to Scandinavia for use in the manufacture of bedding. Coffee, tea, sugar, salt, coconuts, tobacco, fish, livestock, lumber and coal are secondary products and are used locally. Sea swal-

**Towering mountains, typical of the extreme contrasts in Vietnam's geography, add to the area's transportation problems.**

**Roads in South Vietnam are generally poor throughout the country.**

**The Mekong River, flowing through Tibet, China, Laos and Cambodia, makes its terminal, Saigon (above), a port of strategic importance.**

lows' nests, harvested from rocky, offshore islands, are the basis for what westerners consider a rare delicacy—bird's nest soup. Nuoc Mam, a pungent fish brine, is a national condiment. White pottery jars of this strong-smelling liquid are found in every home and those who can force it past their noses will discover that the flavor is far better than the odor.

One other point worthy of mention is the abundance of game in Vietnam. Wild boar, buffalo, elephant and many other game animals are plentiful in some areas, and peacock and wild chickens also offer fleeting targets for the hunter.

The climate of Vietnam is tropical, with a rainy season occurring generally from May to October. Annual rainfall averages 70 inches and temperature ranges from 60 to 86 degrees. As has been mentioned, mildew is a troublesome problem. Book bindings and some plastic items are particularly vulnerable to mildew damage. Clothing and shoes must be aired frequently and must be kept in "hot-closets." These closets have electric lights installed in the bottom and have provisions for air circulation.

In South Vietnam the language, though sometimes a hindrance, is not a barrier to understanding and cooperation. English is widely understood, and classes for members of the Vietnamese armed forces are taught by American field advisors. Many Vietnamese officers who are in key positions have attended US service schools and are familiar with not only our language but also our military organization and doctrine. Their enthusiasm for implementing new ideas and techniques, with guidance from American advisors, is another good indication of the value of our military aid program.

Regarding the advisory duty in Vietnam, many Infantrymen may find themselves in these assignments advising troop commanders. This duty is both challenging and rewarding. A year of helping a regimental or division commander solve his problems is a very practical course which none of our service schools can offer.

**American military aid and advice help the South Vietnamese Army increase its efficiency and potential.**

**This typical market scene is repeated daily in almost every Vietnamese village, town and city.**

In adding up the many attributes of the South Vietnamese nation, it is evident that the contrasts in climate, geography and people contribute immeasurably to its color and vigor. The great strides which have been made recently in this country have undoubtedly advanced the cause of free people in Southeast Asia. Progress, in fact, has been far more rapid in South Vietnam than that experienced during the infancy of our own country.

Without a doubt, this small, dynamic country is a forceful reminder to other nations that freedom and progress toward a better way of life can be attained even in the shadow of the Chinese Communist dragon.

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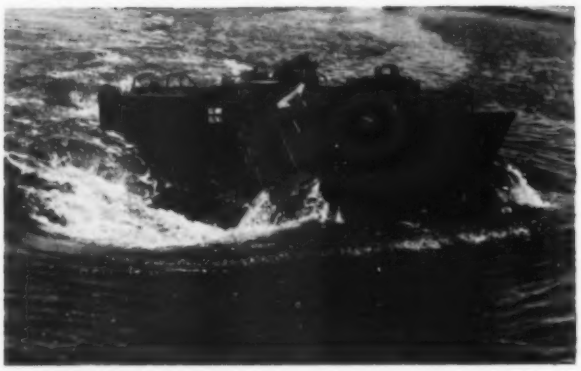
COL CYRIL D. STERNER was commissioned in the Reserve in 1939 and in the Regular Army in 1940. He has been an Infantry platoon leader, company commander, battalion commander and division G3. During World War II, Colonel Sterner participated in the assault landings and campaigns on Leyte and Okinawa. He has attended both the United States and Pakistan Command and General Staff Colleges and in 1953 he was an observer for the United Nations Military Observer Group in Kashmir. After an assignment as PMST, University of Dayton, he served in Vietnam as senior advisor, 4th Military District, and as chief, Combat Arms Training and Organization Division, MAAG, Vietnam, in Saigon. At the present time Colonel Sterner is chief of the Combat Developments Office, USAIS.

# WHAT'S NEW FOR INFANTRYMEN

Changes • New Developments • Items of Interest to Infantrymen



### PERSONNEL CARRIER

The lightweight, air droppable M113 armored personnel carrier, successor to the M59, is now being produced for the Army with initial delivery scheduled for February 1961.

The aluminum-armored vehicle carries a full squad of Infantrymen over nearly any type of terrain and also swims rivers and inland waterways as demonstrated above. The versatile M113 is capable of climbing 60% slopes and can negotiate 30% side slopes. It can land cruise 200 miles at an average speed of 25 mph.

The M113 can be converted to carry rocket launchers, antitank missiles, mortars, cargo and fire direction equipment and it may also serve as an ambulance, communications or command post vehicle.

### GROUND RADAR

A new portable radar system which is designed to look behind enemy lines and provide photographic plots of battle information has been developed for Army combat troops. The system will sweep enemy-held territory in a 25-mile semicircle and by periodic photo plots will help determine whether enemy buildup or attack is impending or a withdrawal is in progress.

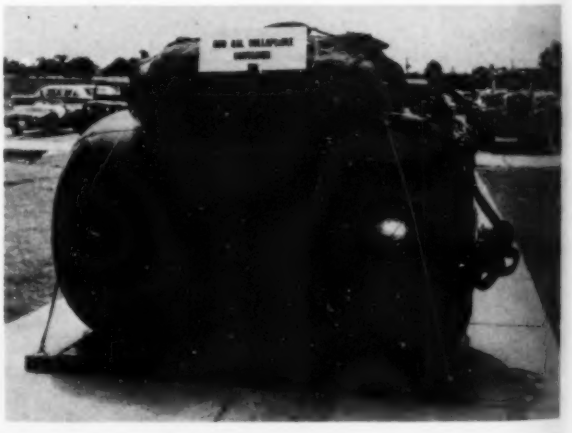
In actual operation, the radar system is transported by helicopter to a point overlooking enemy terrain where a three-man crew assembles the equipment. In a relatively short time, the radar is plotting movement of enemy targets and is relaying this information to higher headquarters.

### OBSERVATION HELICOPTER PLANNED

Department of the Army recently announced plans to develop a turbine-powered helicopter to replace three aircraft currently in use: the L19 observation airplane and the H13 and H23 reconnaissance helicopters. The new helicopter will be lighter and smaller than the present H13. It will cruise at approximately 126 miles per hour, operate for a maximum of three hours without landing and have a payload of 400 pounds, plus the pilot and fuel. Missions of the new helicopter will be target acquisition, reconnaissance and command control.

### REPRODUCTION MACHINES

Several reproduction machines are currently being evaluated by the Army in order to improve the means of reproducing operation orders and overlays at battle group level. Designed for use in the battle group S3 section, one of the machines being considered is able to reproduce overlay-type orders with a topographic map background. This will eliminate the necessity of the recipient of the order having to place the overlay on a map. The machine can also reproduce maps, photographs and photomaps.



### AERIAL DELIVERY CONTAINER

Shown prepared for aerial delivery, the new 500-gallon collapsible container can be used for either water or gasoline.

**NEW SURVEILLANCE DRONE**

A turbo-jet,unmanned surveillance drone was recently flown successfully at the U. S. Army Electronic Proving Ground's Drone Test Facility. The high-performance developmental drone—designated as the AN/USD-5—flew by remote control over the testing area and was directed to its recovery area and commanded to parachute to earth.

Designed for missions of greater speed and longer endurance than previous propeller-driven surveillance drones, the AN/USD-5 will carry electronic surveillance equipment to provide Army commanders with continuous information about the enemy and his movements. The AN/USD-5's speed will make it a difficult target for enemy fire. It is a delta-wing surveillance drone, powered by a Pratt and Whitney YJ-60 jet engine that develops 3000 pounds of thrust.

**TANK RETRIEVER M88**

The 56-ton M88 armored tank retriever is being tested as a possible replacement for the M74 model now in use. Designed to recover light and medium tanks and other comparable equipment, the M88 is capable of a 45-ton pull and can lift 25 tons.

**INFRARED DEVICE**

An infrared "scanner" is currently an object of study at the U. S. Army Combat Development Experimentation Center, Hunter Liggett Military Reservation, California.

The jeep-mounted Thermograph T2 shown above records infrared thermals emitting from personnel, vehicles and terrain. Darkness will not offer concealment since the device records upon polaroid film the true outline of any object within its range.

**NEW ARCTIC BOOT**

A new insulated arctic boot being tested by the Army will afford increased foot protection for combat soldiers. The boot has been found to function adequately in temperatures reaching 102° below zero. The cutaway view shows application of the vapor barrier principle in sealing three layers of wool fleece in the boot's upper portion and two layers of felt in the midsole between the inner and outer rubber layers. On the boot on the left, note the air-release valve used for equalizing air pressure that may build up inside the boot's insulation. The boots weigh 2¾ pounds each and are adaptable to use with skis or snowshoes.

## MONTHLY LIST OF INSTRUCTIONAL MATERIAL

*The Monthly List,* an official publication of the Infantry School, is produced to facilitate the coordination of Infantry doctrine among Army service schools and to offer Infantry School instructional materials to Army agencies which conduct, support or monitor school-type instruction. *The Monthly List* is distributed under the provisions of USCONARC Memorandum Number 48, 14 October 1958, and each authorized addressee is furnished one gratuitous copy of any item listed which he specifically requests for official use.

*Infantry* includes items listed in current issues of the *List* as a reader service. Items which are preceded by an asterisk may be purchased from the Book Department, USAIS, Fort Benning, Ga., at the prices indicated, by anyone who is a member of the United States Armed Forces and who so states when ordering. The official military unit or agency address should be included with all such orders since such mail cannot be sent to a private residence. If a personal address is given, the cost of postage must be inclosed with the order.

Items not marked with an asterisk are produced in limited quantities for resident instruction at the Infantry School and are not available for purchase. However, a unit or agency having a strong official need for any of these items may request a gratuitous copy from the Editorial and Pictorial Office, USAIS, Fort Benning, Ga. Such requests must state the purpose for which the material is needed and must include the official title and unit or agency address of the requester. Properly justified requests will be filled so long as the supply lasts.

***Introduction and Concept of Leadership,** 2093A-USAR (RDT). The concept of command and military leadership to include: responsibilities and traits of a leader; leadership principles; actions and orders; the evaluation of leadership results in terms of morale, discipline, *esprit de corps* and proficiency. $.15

***Commander-Staff Officer Problems,** 2094A-USAR (RDT). Integrated conference and practical exercise presenting a leadership problem-solving process; functional organization; chain of command; senior-subordinate relationship to include staff relations with subordinates; span of control; and counselling. $.25

***Leadership Problems of Command in Training and Combat,** 2095B-USAR (RDT). Integrated conference and practical exercise designed to illustrate leadership problems at the company level to include: mental and physical conditioning for combat; control of fear, rumor and panic; development of firepower; restoration of combat effectiveness; development of a positive attitude in junior leaders; and the commander's leadership problems in an isolated situation. $.25

***Leadership Problems of the Battle Group Commander,** 2096-USAR (RDT). Integrated conference and practical exercise designed to illustrate leadership problems at the battle group level to include: restoring lost momentum in the attack; development of a positive attitude in subordinates; evaluation of combat performance; battlefield appointments; handling of attached allied units; and public information in combat. $.40

***Administration of Military Justice,** 2234-USAR (RDT). Conference covering disposition of charges by the company and battle group commanders, and the action on charges which are received by the battle group commander. Practical exercise on processing military justice administration at battle group headquarters prior to referral of case for trial. $.25

***Administration of Military Justice,** 2235-USAR (RDT). Conference covering review and actions by the battle group on records of trial by summary and special court martial. Practical exercise on reviewing record of trial by special court martial. $.25

***Civil Affairs,** 2236-USAR (RDT). Conference covering civil affairs functions and activities to be performed at battle group, division, corps and army level; mission, staff and unit organization, functions, policies and procedures for the conduct of civil affairs and relationship with civilians as prescribed by the 1949 Geneva Convention. $.30

**Infantry Division Battle Group Operations** (Two-Sided Free Map Maneuver-MM) 65-A16. Map Exercise (two-sided free maneuver) in which students are organized as a battle group commander and staff. Umpires represent higher, lower and adjacent units but impose no restrictions on player forces. Problem encompasses the following: planning guidance; continuous estimates; timely decisions; employment of supporting arms and nuclear weapons; preparation of plans and orders; and conduct of both offensive and defensive operations.

## TRAINING FILMS

The following training films have been approved for release to requesting units:

**MF 8-9212,** Emergency Medical Treatment Unit—Phase I, 12 minutes.

**TF 9-2845,** Liquid Guided Missile Propellant Sampling, Surveillance and Deterioration, 18 minutes.

**TF 10-2874,** Quartermaster Operations in the Infantry Division, 25 minutes.

**TF 11-2851,** Fundamentals of Radio Trouble Shooting—Part I —Principal Technique, 29 minutes.

**TF 17-2726,** Commander's Cupola M1, Machine Gun—Part I —Assembly, Installation and Disassembly, 18 minutes.

**TF 20-2968,** The Army Field Stock Control System—Part I—Stock Accounting Operations, 22 minutes.

**TF 38-2840,** Financial Inventory Accounting, 24 minutes.

**TF 38-2864,** Defense Procurement—Formal Advertising, 43 minutes.

**TF 44-2859,** Theory of Moving Target Indicator Operation, 20 minutes.

**TF 46-2847,** Short Field Procedure L-19 (Bird Dog)—Part I—Power Approach and Maximum Performance Take-Off, 16 minutes.

## TRAINING LITERATURE

The following manuals and other training literature have recently been printed by Department of the Army and are available to instructors through normal publications channels:

**FM 20-20,** Military Dog Training and Employment (April 1960).

**Changes No. 1 to FM 23-82,** 106-mm Rifle, M40A1 (March 1960).

**TC 7-3,** Functioning and Employment, Antipersonnel Weapon (CLAYMORE) M18 and T48E1 (February 1960).

**ASubjScd**

**7-1,** Organization, Mission and Employment, Infantry and Airborne Division Battle Group (revision).

**7-24,** 90-mm, Full-tracked, Self-Propelled, Gun, M56 Weapons Training (new).

**7-31,** Assault Gun Platoon Tactical Exercises (new).

**21-2,** Drills and Ceremonies (revision).

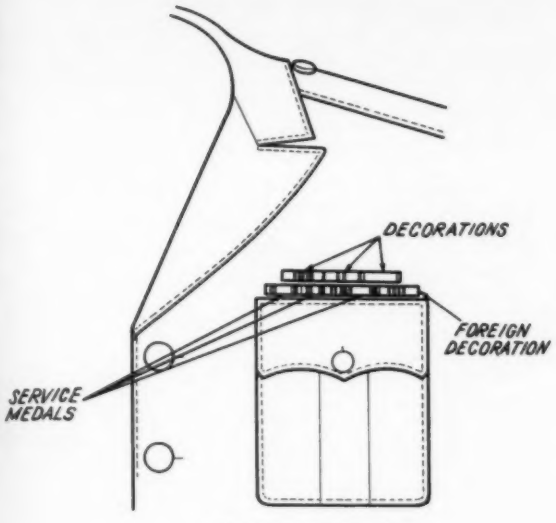
**21-5,** Guard Duty (revision).

**21-14,** Military Courtesy and Customs (revision).

**21-20,** Individual Day and Night Training (revision).

**21-21,** Land Navigation (new).

**21-37,** Physical Training (new).




*Wearing of service ribbons.*

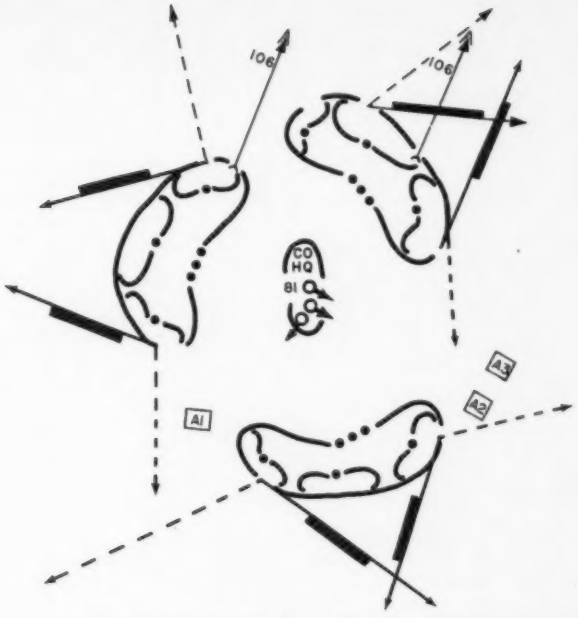
**Service Ribbons and Badges:**
Service ribbons and ground badges are worn immediately above the pocket on the left breast of the uniform.

a. *Ribbons* are worn in the following order of precedence from wearer's right to left, starting at the top:

Decorations
Service medals (in order of awarding)
Foreign awards

There should be a 1/8-inch space between each line of ribbons. The width of the lines is dependent on the width of the garment.





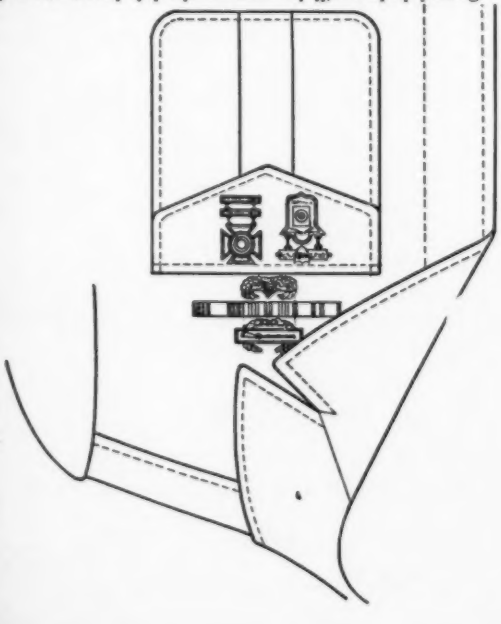

*Rifle company in perimeter defense (schematic).*



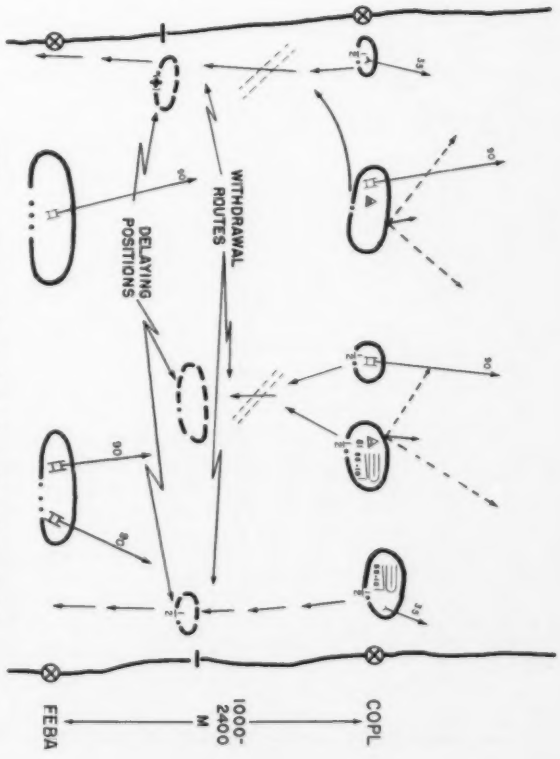


b. *Ground badges* will be worn on the left breast above the line of service ribbons, except that whenever a person is entitled to wear two ground badges the following applies: the combat infantryman badge or medical badge will be worn above the line of ribbons and the glider badge or the Army aviation medical officer badge, or one of the parachutist or aviator badges, will be worn below the line of service ribbons.

c. *Qualification badges* will be worn on the flap of the pocket on the left breast below the line of service ribbons and below any ground badge.








*Rifle company combat outpost dispositions (schematic).*

*Battle group in defense (schematic).*

### Wearing of Uniform Insignia

**Name Plates:**

May be worn on the uniform when prescribed by the commanding officer. They will not be purchased with appropriated funds. In general, they will conform to the following:

*Size:* 1 by 3 inches (longer for lengthy names).

*Color:* Non-lustrous jet black background.

*Lettering:* Last name only, white block lettering ¼ to ⅜ inch high.

*Worn:* Centered on flap of right breast pocket.

**U.S. ARMY Distinguishing Insignia:**

A woven label 4¼ inches in length and 1 inch wide consisting of "U.S. ARMY" in golden yellow block letters ¾ inch high on a black background.

Worn on upper left breast of:

- Jacket, cotton, OG107
- Coat, cotton, OG107
- Shirt, wool, OG107
- Parka, cotton-nylon, OG107

**Name Tapes:**

May be worn when prescribed by commanding officer. They will not be purchased with appropriated funds. Name tapes will be white with black letters. They will be approximately 4¼ inches in length and 1 inch in width. They may be worn on the upper right breast of the items of field clothing designated above under topic: "U.S. ARMY Distinguishing Insignia."

**Combat Leader's Identification:**

The combat leader's identification will be worn by commanders of Regular Army, Army Reserve and Army National Guard units whose mission it is to combat the enemy by direct means or methods, or units at corps level or below whose mission is to control or directly support such units.

This identification will be a green cloth loop, 1-5/8 inches wide, worn in the middle of both shoulder loops of the service coat, jacket, overcoat, or shirt when worn as an outer garment.








*Rifle company in defense (schematic).*

NOTE: All distances are in Meters

### Aerial Medical Evacuation Procedure

A request for aero-medical ambulance evacuation should contain the following minimum information:

1. Number and description of wounded or injured.
2. Exact location of a suitable landing site for the aircraft.
3. Formation of air-ground panels or color of smoke to be used to identify landing site.





Wearing of foreign badge.




*d. Foreign badges* awarded by a friendly foreign nation will be worn on the right breast above the line of United States emblems and badges. Such foreign badges will not be worn except when at least one United States medal or service ribbon is worn simultaneously.

*e. Foreign decorations* awarded by a friendly foreign nation will not be worn on the uniform unless at least one United States military decoration or service medal is worn at the same time.

## COMMUNICATION DATA

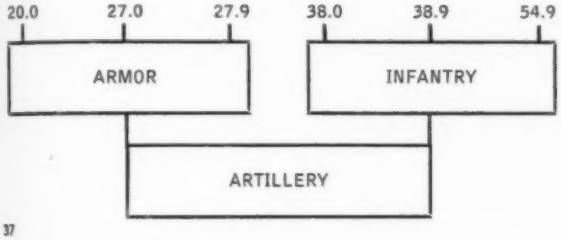
### TACTICAL RADIO CAPABILITIES

Distances given are reliable under average terrain, weather and operating conditions.

| RADIOS | RANGE | | | |
|---|---|---|---|---|
| | STATIONARY | | | |
| | CW | | VOICE | |
| | KM | MILES | KM | MILES |
| AN/PRC-6 | | | 1.5 | 1 |
| AN/PRC-10 | | | 5-8 | 3-5 |
| AN/GRC-3 to 8 | | | 16 | 10 |
| AN/GRC-9 | 48 | 30 | 16 | 10 |
| AN/GRC-19 | 120 | 75 | 80 | 50 |
| AN/GRC-46 (Same as GRC-19 on CW and voice) (on Teletype) | | | 80 | 50 |

### INF FM RADIO FREQUENCIES IN MEGACYCLES

| | |
|---|---|
| AN/PRC-6 | 47.0-55.4 |
| AN/PRC-10 | 38.0–54.9 |
| AN/GRC-7 | |
| Set-1 (RT-68) | 38.0–54.9 |
| Set-2 (RT-70) | 47.0–58.4 |
| Aux-Rec | 38.0–54.9 |






**3. Requesting Fire:** The fire request should include the following elements in the sequence indicated below:

| *ELEMENT* | *EXAMPLE* |
|---|---|
| a. Identification of observer | 1. I AM THE PLATOON LEADER OF 1ST PLATOON, ALFA COMPANY; or, THIS IS KEEL 11 |
| b. Warning order | 2. FIRE MISSION |
| c. Reference point or coordinates | 3. FROM REGISTRATION POINT (or COORDINATES 734536) |
| d. Azimuth | 4. AZIMUTH 230 |
| e. Location of target | 5. LEFT 300, ADD 900 |
| f. Nature of target | 6. 15-MAN PATROL |
| g. Control | 7. WILL ADJUST |

**4. Fire For Effect in Initial Data:** If the location of the target is accurate (within 50 meters) and the fire requested will be effective without any adjustment, FIRE FOR EFFECT may be requested in initial data.

**5. Subsequent Corrections:** Visualize an imaginary line (OT line) from observer to the target. All corrections are in relation to the OT line. After adjustment has started, the observer sends the fire direction center corrections *to be applied to the next rounds.* Corrections are given in the following order:

a. The lateral deviation (in meters) of the burst center with respect to the OT line.

b. The desired range change in hundreds of meters. Normally, range bounds are 200, 400 or 800 meters, with the objective of immediately establishing a bracket on the target. After an initial bracket is obtained, it is successively split until a 100-meter bracket is split; at that time, FIRE FOR EFFECT is requested.

c. To conclude fire mission, observer reports END OF MISSION and the results of the fire for effect.





## ARTILLERY FIRE REQUESTS AND ADJUSTMENT OF FIRE

**1. General:** Despite the availability of artillery observers, infantrymen are often in the best position to observe and adjust artillery fire. Accordingly, every Infantryman should be capable of requesting and adjusting artillery fire should the need arise. In general, procedures are the same as for conduct of fire with mortars.

**2. Preparation of the Fire Request:**

a. *Location of the target:* The location may be given in any manner clearly understandable to both the observer and the fire direction center. Normally, one of the following methods is used:

(1) Grid Coordinates—determine the grid coordinates of the target location. Example: COORDINATES 73536.

(2) Shift—From a registration point, reference point, a numbered concentration or any other point the location of which is known to both observer and the fire direction center. The shift is announced as so many meters RIGHT or LEFT and so many meters over (ADD) or short (DROP) of the reference point. Example: With your field glasses you determine that your target is 200 mils to the right and about 400 meters short of the registration point. You have determined that the distance from observer to reference point is 3000 meters. To compute the shift you multiply the 200 mils x 3 (distance in thousands) = 600 meters. You then direct the shift as follows: FROM REGISTRATION POINT, RIGHT 600, DROP 400.

(3) Polar coordinates—If observer location is known by the fire direction center, the initial location of a target may be reported by giving the direction (azimuth) and the distance to the target from observer's position. Example: Determine azimuth, estimate or measure distance, then give this information—AZIMUTH 120, DISTANCE 2100.

(4) If target location cannot be obtained, a marking volley may be used to determine shift to target. Example: Request the fire direction center to "MARK CENTER OF SECTOR" or "MARK REGISTRATION POINT." (Observers may request air burst or smoke rounds to assist in locating the initial rounds.)

b. *Azimuth from observer to the target:* Measure the azimuth in mils from observer to the target by use of a compass or a map.

c. *Observer-target distance:* The distance from observer to the target can be measured on a map or estimated. This distance (in thousands of meters) is used to convert mils to meters during adjustment.



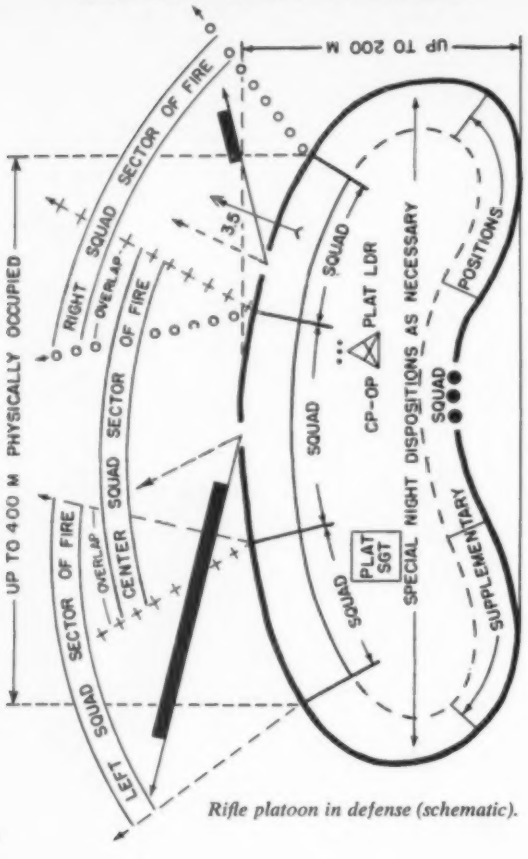
## GENERAL RULES FOR RADIO USE

1. Listen before transmitting.
2. Avoid excessive tuning and testing.
3. Message should be clear, concise, premeditated and, if possible, previously written.
4. Speak clearly, slowly, in natural phrases, and enunciate each word. If receiving operator must write, allow sufficient time for writing.
5. Always assume the enemy is listening.
6. If jammed, detune set and notify superior headquarters by alternate means.
7. Maintain whip antennas in a vertical position.

### FREQUENTLY USED PROWORDS

| | |
|---|---|
| THIS IS | "This transmission is from the station whose designation immediately follows." |
| OVER | "This is the end of my transmission to you and a response is necessary. Go ahead: transmit." |
| SAY AGAIN | "Say again all of your last transmission." |
| CORRECTION | "An error has been made in this transmission (or message indicated). The correct version is ....." |
| I SAY AGAIN | "I am repeating transmission or portion indicated." |
| ROGER | "I have received your last transmission satisfactorily." |
| WILCO | "I have received your message, understand it and will comply." |
| OUT | "This is the end of my transmission to you and no answer is required or expected." |

## INFANTRY UNITS IN DEFENSE




*Rifle platoon in defense (schematic).*



## TROOP LEADING STEPS

1. BEGIN PLANNING
   a. Plan the use of available time.
   b. Begin the estimate of the situation.
      (1) Analyze terrain from map, sketch, or aerial photograph for:
         (a) Observation and fields of fire.
         (b) Cover and concealment.
         (c) Obstacles.
         (d) Critical terrain features.
         (e) Avenues of approach.
      (2) Analyze enemy strength, locations, dispositions, and capabilities.
   c. Make preliminary plan.
2. ARRANGE FOR:
   a. MOVEMENT OF UNIT (Where, when, how)
   b. RECONNAISSANCE (Select route, schedule, persons to take along, use of subordinates)
   c. ISSUE OF ORDER (Notify subordinate leaders of time and place)
   d. COORDINATION (Adjacent and supporting units)
3. MAKE RECONNAISSANCE: (Continue estimate, complete terrain analysis. If necessary change preliminary plan)
4. COMPLETE PLAN: (Receive recommendations, change preliminary plan as needed, prepare order)
5. ISSUE ORDER: (Include terrain orientation)
6. SUPERVISE

## ESTIMATE OF THE SITUATION

1. MISSION
2. SITUATION AND COURSES OF ACTION
   a. Weather, terrain, comparison of enemy and friendly situation.
   b. Enemy capabilities.
   c. Own courses of action.
3. ANALYSIS OF OPPOSING COURSES OF ACTION (Analyze effect of each enemy capability on each of own courses of action)
4. COMPARISON OF OWN COURSES OF ACTION (Summarize advantages and disadvantages of own courses of action)
5. DECISION (Who, what, when, where, how and why)



## COMM EQUIPMENT — IMMEDIATE ACTION

**RADIO SET AN/PRC-10 Immediate Action**

IF OTHER STATION DOES NOT ANSWER, check operation of your set. Turn "OF-Remote-On-Cal" switch to On position, "Squelch control" off (counter-clockwise), "Vol" (Volume) control full on (clockwise); tighten antenna connection and listen for rushing sound in handset.

IF RUSHING SOUND IS NOT HEARD OR IS WEAK, remove and re-insert battery connector.

IF RUSHING SOUND IS NOT HEARD OR CONTINUES TO BE WEAK, change battery.

IF RUSHING SOUND IS STILL NOT HEARD, change handset. If none of these steps is effective, your set is defective. Send it to a repairman.

IF RUSHING SOUND IS HEARD, push Press-to-Talk switch. If rushing sound continues, change handset. If rushing sound continues, your set is defective. Send it to a repairman.

IF CALIBRATION SIGNAL WAS NOT HEARD, change battery and try calibration again. If set will not calibrate, communication may be possible by proceeding as if the set would calibrate and tuning in the vicinity of your assigned channel until a station in your net is heard. This dial setting can be assumed to be your correct channel setting.

**RADIO SET AN/PRC-6 Immediate Action**

IF OTHER STATION DOES NOT ANSWER, check position of External-Off-Internal switch; turn Volume control full on (clockwise); listen for rushing sound in earphone.

IF NO RUSHING SOUND IS HEARD OR IS WEAK, check Air Valve. Listen. Remove and re-insert battery connector. Listen. Insert new battery. Listen. If still no rushing sound is heard, set is defective. Send it to a repairman.

Ⓑ IF RUSHING SOUND IS HEARD, push Press-to-Talk switch. If rushing sound continues, set is defective. If rushing sound ceases, blow into microphone and new sound (called sidetone) should be heard in earphone.

IF SIDETONE IS NOT HEARD, your set is defective. Send it to a repairman.



**FIELD TELEPHONES Immediate Action**

If the Telephone TA-312/PT fails to function:

FIRST

Check the line terminals for firm connections. If they appear to be properly connected:

THEN

Check the selector switch position—if the telephone is being used in field system, the switch should be in the CBS position or LB position. If in use with a civilian system, the switch should be in the CB position. If the switch is in the proper position:

THEN

Check the INT-EXT switch position—if using handset H-60/PT, which is part of the telephone, the switch should be in the INT position. If using the auxiliary handset-headset H-144/U, the switch should be in the EXT position.

THEN

Depress the Push-to-Talk switch and blow into the transmitter. If no sound is heard in the receiver, check the battery compartment. One battery cap should be up and the other down. If batteries are not available, by talking loudly into the receiver you can communicate approximately four miles:

FINALLY

If you have performed all the tests and still are not able to communicate, call qualified communication personnel to assist you.

Ⓓ **SOUND POWERED TELEPHONES Immediate Action**

Check the line terminals for proper connection. Attempt to make contact by talking loudly into the receiver. Reduced distance communications can be accomplished by this means.

# THE INFANTRY MUSEUM

THE INFANTRY now has a museum of its own. In October 1959, the United States Army Infantry Museum was officially opened at Fort Benning, Georgia. This event marked the beginning of a far-reaching program to preserve the history and traditions of the Infantry. The main purpose of the museum is to serve as a home for documents and equipment, either of historical or sentimental value, pertaining to the United States Infantry. Above all, this museum fills a need for a place to commemorate the proud heritage and traditions for which the Infantryman has long been noted. In addition, it provides a place where present-day Infantrymen can see and enjoy historic pieces of Infantry equipment.

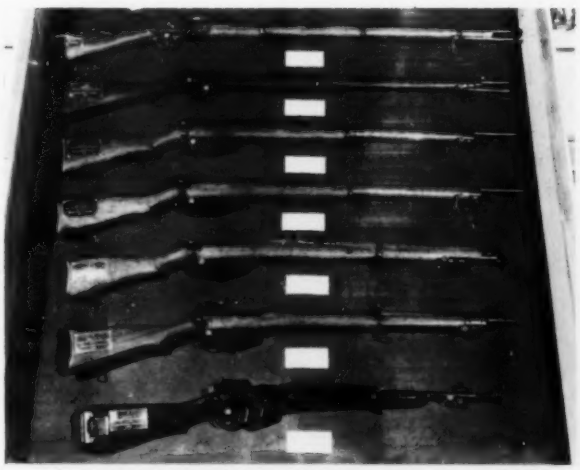
**Murals of Infantry history form an impressive backdrop for weapons and flag displays.**

AN EXAMPLE of Infantry equipment contributed to the museum by foreign countries is shown in the picture at the right. These rifles were presented to the United States Army Infantry School by the British School of Infantry in 1959. They range from the Snider breech loading rifle of 1866 to the rifle No. 5, MKI, of 1945.

The Infantry Museum is essentially a military museum and needs items which pertain to the Infantry. It acquires exhibit items either through loans or donations. Anyone who loans an item to the museum may withdraw it at any time. A donation, however, is an outright gift to the museum, and it is understood at the time the donation is made that such a gift becomes the property of the Infantry Museum. Personnel who desire to loan or donate items may write to the Custodian, United States Army Infantry Museum, Fort Benning, Georgia.

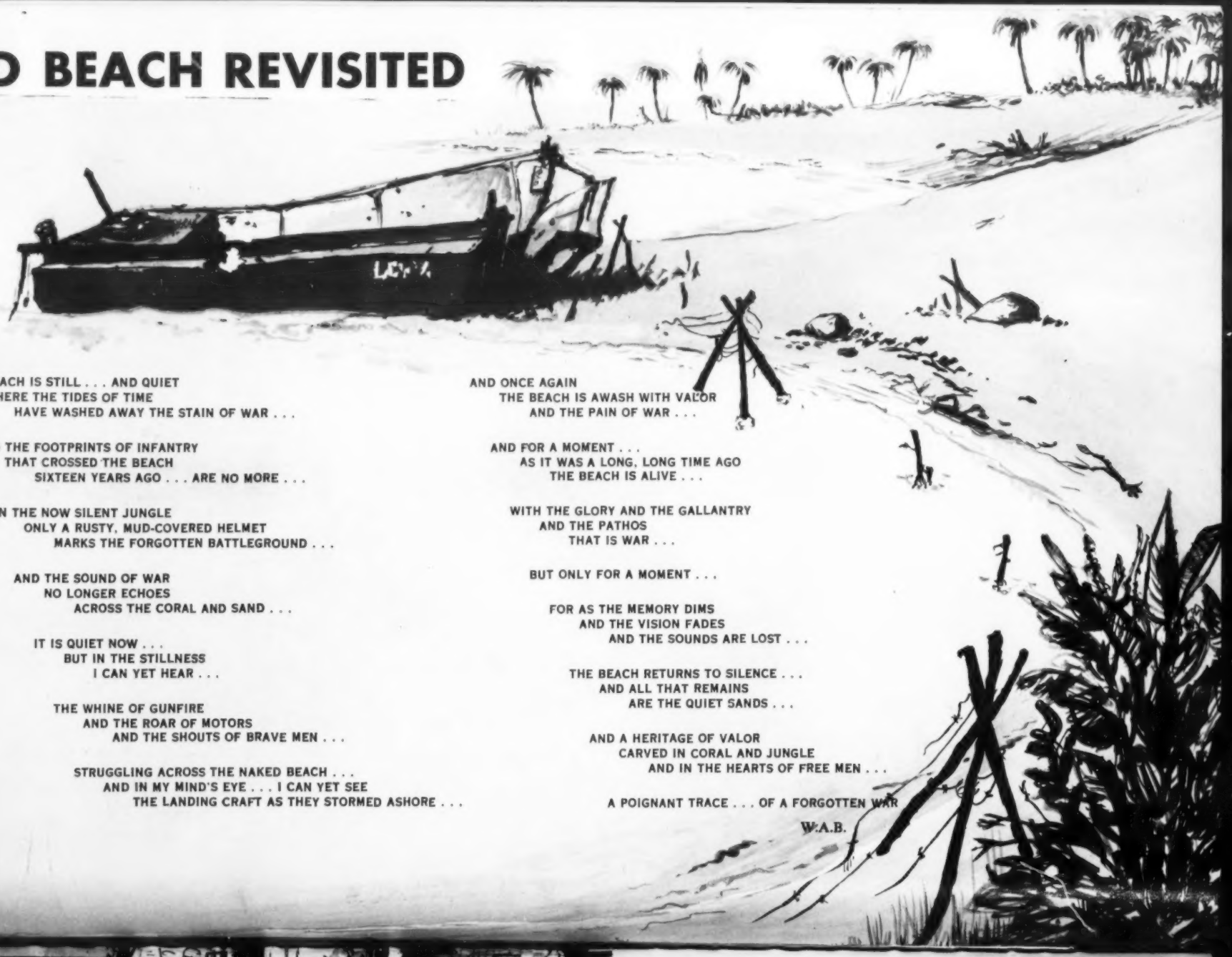
**This Gatling gun was a gift from the President of Costa Rica.**

IN THE photograph at left you see the mural that is on the rear wall of the museum. It depicts several of the ten eras into which the museum has divided its displays of United States Army Infantry history. These ten periods begin with the Revolutionary War in 1776 and continue up to the present. The displays include weapons, equipment, documents and pictures of the era that they represent. There are rifles from early muzzle loading flintlocks to the modern M14. Among the equipment captured by Infantrymen during World War II are German and Japanese weapons, helmets and flags. Also, there is a display of captured North Korean and Chinese Communist equipment. For those interested in regimental history, the museum has a good collection of regimental crests.



**This unique rifle display was a gift from the British School of Infantry.**

# RED BEACH REVISITED



THE BEACH IS STILL . . . AND QUIET
WHERE THE TIDES OF TIME
HAVE WASHED AWAY THE STAIN OF WAR . . .

AND THE FOOTPRINTS OF INFANTRY
THAT CROSSED THE BEACH
SIXTEEN YEARS AGO . . . ARE NO MORE . . .

IN THE NOW SILENT JUNGLE
ONLY A RUSTY, MUD-COVERED HELMET
MARKS THE FORGOTTEN BATTLEGROUND . . .

AND THE SOUND OF WAR
NO LONGER ECHOES
ACROSS THE CORAL AND SAND . . .

IT IS QUIET NOW . . .
BUT IN THE STILLNESS
I CAN YET HEAR . . .

THE WHINE OF GUNFIRE
AND THE ROAR OF MOTORS
AND THE SHOUTS OF BRAVE MEN . . .

STRUGGLING ACROSS THE NAKED BEACH . . .
AND IN MY MIND'S EYE . . . I CAN YET SEE
THE LANDING CRAFT AS THEY STORMED ASHORE . . .

AND ONCE AGAIN
THE BEACH IS AWASH WITH VALOR
AND THE PAIN OF WAR . . .

AND FOR A MOMENT . . .
AS IT WAS A LONG, LONG TIME AGO
THE BEACH IS ALIVE . . .

WITH THE GLORY AND THE GALLANTRY
AND THE PATHOS
THAT IS WAR . . .

BUT ONLY FOR A MOMENT . . .

FOR AS THE MEMORY DIMS
AND THE VISION FADES
AND THE SOUNDS ARE LOST . . .

THE BEACH RETURNS TO SILENCE . . .
AND ALL THAT REMAINS
ARE THE QUIET SANDS . . .

AND A HERITAGE OF VALOR
CARVED IN CORAL AND JUNGLE
AND IN THE HEARTS OF FREE MEN . . .

A POIGNANT TRACE . . . OF A FORGOTTEN WAR

W.A.B.